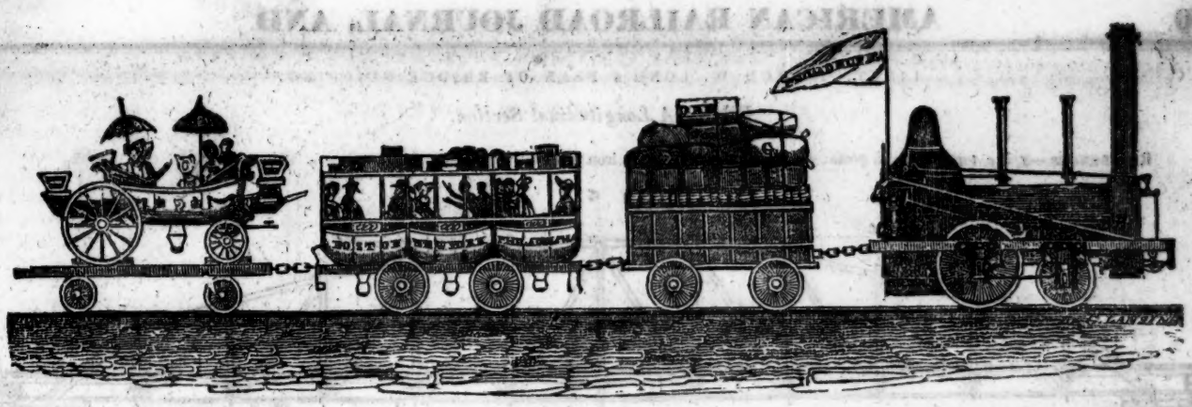
689



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, NOVEMBER 7, 1835. [VOLUME IV.—No. 44

CONTENTS:

Short Curves in Railroads; Lake Erie and Mad River Railroad; Toronto Railroad, &c..... 689
Lieut. Geo. W. Long's Plan of Bridge Building; Internal Improvement Convention, &c..... 690
Col. Long's Plan of Bridge Building; Hamilton and Port Dover Railroad, &c. &c. &c..... 691
Letter from John B. Jervis, Holmes Hutchinson, and Fred'k C. Mills, relative to a Ship Canal from Utica to Oswego..... 692
Welland Canal; The Island of N. York, &c. &c. 696
Fair of the Mechanics' Institute..... 697
Common Schools; Census of New-York..... 700
The Army, &c. &c..... 701
Tea Plant; European Intelligence..... 702
A New Steamboot—the Shark, &c..... 703
Poetry; Advertisements..... 704

AM ERICAN RAILROAD JOURNAL.

NEW-YORK, NOVEMBER 7, 1835.

Short Curves in Railroads.—Much difficulty and danger has heretofore attended the use of Locomotive Engines and Cars at any thing like a *high* velocity, on Railroads with *short* Curves—and not only *danger*, but an immense outlay in the construction to avoid Curves, and an enormous expence for repairs, has attended the use of Railroads, thus far, both in this country, and in Europe in consequence of the adoption, in many cases from necessity, of Curves with a short radius; that is to say 500 feet and under.

In consequence of the enormous expense for repair, both of the Road and the machinery, resulting from short Curves and rapid movement, great efforts have been made, at an incredible expense, both in Europe and the United States,—not less, we presume than *three* to *five millions* of dollars—to discover some remedy for the evil; and, in this, as in most other cases, where the object sought is of importance, improvements have been made, which in some measure lessens the evil; but still serious difficulties were encountered; accidents continue to occur—and ingenious men to propose remedies.

Amongst the various plans proposed, which have come to our knowledge, is one invented by Mr. Cleveland, of Baltimore, a model of which we have examined with much care, and tried upon a miniature Railroad,—which bids fair to be of great value, not only on those Roads now in use with short Curves, but more especially on those about to be commenced, as it will enable them in many cases to avoid deep cutting of rocks and ridges, and hills, by going round them, with short Curves, *much* shorter, indeed, than has, heretofore, beed deemed by Engineers, practicable, or *possible*.

If the principle works as well on a large scale, that is, in cars of the usual size, as it does in miniature, or in the model—and we have good reason to believe that it will, or in fact does, as a car sufficient for 25 passengers has been in use on the Baltimore and Susquehannah Railroad, which has been run for a short distance, on a straight Road, at the rate nearly a mile in a minute, and on the curved part, at the *rate* of thirty miles an hour—it will be found to be one of the most valuable improvements of the day.

The invention of Mr. Cleaveland is exceedingly simple, and its introduction and use on Roads which have not yet obtained their cars, will be attended with very little additional expense in the first outlay—while it will reduce, in a very great degree, the expense of repairs—not only of the machinery, but of the *Road* also.

It is believed that a car constructed on this plan will not require more power to move it on a curve of 100 feet radius, than an ordinary car will on a curve with *four* or even *five* hundred feet radius—and what is of greater importance, the *risk*, or danger is reduced in an equal ratio, in great velocities.

Should the anticipation of Mr. Cleveland and many others who have witnessed its performance, or examined the model, be realized, it will prove a means of greatly reducing the expense and danger of Railroads and Railroad travelling.

Lake Erie and Mad River Railroad.—At a meeting of the Stockholders of this Road, held on the 26th ult., at Sandusky City, the following gentlemen, were unanimously elected Directors: Gen. Joseph Vance, President, H. G. Philips, Samuel Farrer, C. G. Swain, C. Cavalin, P. Spinning, —— Pierson, R. Patterson, L. Curtis, Josiah Hodges, John G. Camp, E. Cook, and S. M. Lockwood. The anticipation of the public in relation to this Road, we are assured, will not be disappointed. The work is progressing rapidly, the greatest proportion of it having been surveyed, and put under contact. The importance of this work to Buffalo, and to New-York, should not be overlooked, and every exertion used by our capitalists and merchants, to insure for it as early a competition as possible.—[Buffalo Adv.]

A meeting of subscribers to the survey of a Railroad from Toronto to *Lake Simcoe*, was held on the 22d ultimo, W. B. Jarvis, Esq., in the Chair. Mr. Roy, the engineer employed, submitted his report, from which it appeared that there were no obstacles in the way of a Road being constructed, and pointing out what he conceived to be the best route for it to follow. A resolution to the same effect was passed, a subscription entered into to defray the expenses already incurred, and it was ordered that a meeting should be called on the 5th instant, when a Joint Stock Company will probably be formed.—[Montreal Gaz.]

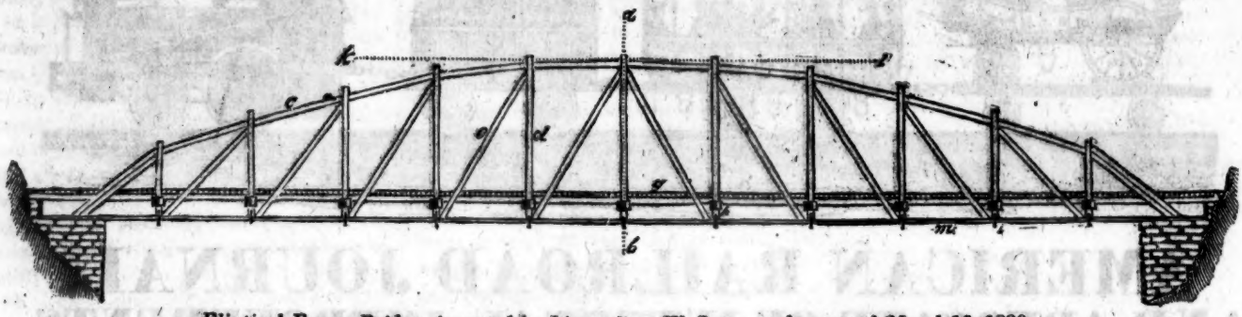
Great Ships.—We learn from the London United Service Journal, that a ship of 110 guns called the Royal Sovereign, is building at Portsmouth, tonnage 3039, and that the frames of two others, to be called the Victoria and Algiers, of the same size and metal, are preparing at Pembroke. These ships are the commencement of a new class of first rates, of tremendous power, being armed on the lower decks with long 68 pounders.

Letters were received yesterday from Havana, dated on the 12th ult., which state, that there had been a severe gale at Matanzas, in which three brigs had been driven on shore, one of them belonging to Portland, and that a vessel had been despatched to Matanzas to bring to Havana the cargo of one of the brigs.

LIEUT. GEORGE W. LONG'S PLAN OF BRIDGE BUILDING.

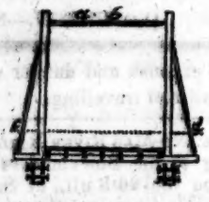
Fig. 1—*A Longitudinal Section.*

REFERENCES.—*a*, *b*, *c*, top braces; *d*, posts; *e*, braces; *g*, floorway; *i*, iron rings.



Eliptical Frame Bridge, invented by Lieut. Geo. W. Long, and patented March 10, 1830.

Fig. 2—*A Transverse Section.*



We cheerfully give place to the following communication, in relation to Lieut. Long's plan of bridge building. It will be found we think worthy of attention and should have been published by us at an earlier day, but with many other communications, was delayed by the illness of the editor.

In considering the above plan for a bridge, it may be compared to a beam supported at each end, to do which, it is necessary to consider that in a beam of great length compared with the depth, it becomes a load for itself; and that a greater length of beam can be had by reducing it to the shape to be equally strong throughout, which is all that is requisite for a bridge. In a solid beam, this reduction may be had to the shape of an elipsis, and in the frame it does not differ very essentially from the same. The above frame, then, is calculated on the principle of the beam, with the strings as the first point of fracture, and the top braces as the last, and reduced to that shape to be equally strong throughout. Or it may be explained by comparing the top braces to an arch, the thrust of which is received by the strings, and resisted by them, producing between the different sets, counter stress of the same magnitude to each other, and here this plan has advantages over other framed ones, for intead of the opposing stress of the top timbers, being carried parallel to the strings as in direction of H. L. (see the figure) andrequiring a set of ties to brink it back again, these timbers are directed down, and terminates in them. This simplifies the frame, and greatly reduces the expense of it. The actual stress on the strings and top braces, may be calculated by the proportion of the depth of the frame, and half the length of it, as depth of frame, is to half the length, so is the weight placed on it, to the stress on these timbers in weight. This proportion comes from both demonstrations, by the arch and the beam, taking the strength of the beam as the depth instead of square of the depth, as in a solid beam. This stress on the timbers, it will be seen, is in their strongest directions, and thus with a proportional depth and increased size of these timbers, the strength of the bridge may be carried to an unlimited extent, without undue expense. The drawing shows the mechanism of the frame so plainly, that it is deemed unnecessary to give very particular explanations of it.

In 1831, the proprietor of the patent gave the use of it for a bridge over Tanners Creek, near Lawrenceburg, Indiana, for the first one constructed, the result of which was given him by the person to whom the use of the patent was given, Jonathan Woodbury, in the following words, viz.

"The patent which your liberality furnished me with, has been made use of, and instead of a bridge that would cost $12 or $15,000, the Committee which I informed you of for building a bridge, have just completed said bridge, which cost $3,130;" "its whole length upwards of 400 feet, and its width 22 feet, fifty feet high from the bed of the creek, and seventy-six (76) feet span between the piers, the whole of wood except two stone piers 19 feet high, from the bed of the creek, and framed timbers upon these piers for the arch to rest upon, the other part of the bridge is on bents 20 feet apart, all finished in a workmanlike manner." "That part which we are indebted to you for, is thought to be the best model ever yet found out, both as to strength and cheapness."

"The strength of your patent is thought to be almost beyond calculation, by a comparative view of its cheapness, and the size of its timbers; and should it prove as good as we now anticipate, I have no doubt but it will be a source of income to you; we shall have a fair experiment of all its qualities."

The size of the timbers given for the above bridge, was 8 inches square. The bridge is yet standing (1835) and has, so far answered the public expectations, and others are now building in the same neighborhood.

GEORGE W. LONG.

We are glad to notice that Mr. N. H. BAIRD has commenced taking the levels for the COBOURG and *Price Lake* Railroad.—Though the country is hilly, yet it appears that, from the number and favorable positions of the ravines, but little obstacle will have to be overcome. It has not yet been determined at what point on *Rice Lake* the road will terminate.—[Montreal Gazette.[

The stockholders of the COBOURG Railroad Company were to meet in that town yesterday, for the purpose of choosing Directors.

Pursuant to a call of a public meeting of the citizens of New York, at the Merchant's Exchange this day at 12 o'clock, for the purpose of choosing Delegates to represent the city and county of New York, in the Convention to be held at Utica on the 11th inst., for the purpose of adopting measures to promote a general system of Internal Improvement, his honor the Mayor was called to the Chair, and Saul Alley and Caleb Barstow appointed Secretaries.

After the objects of the meeting had been explained by the Chairman, the following Resolutions were presented by Joseph Blunt, Esq., and were unanimously carried.

Resolved, That the entire success of the western and northern canals, and the prosperous condition of the public finances, justify an extension of the benefits of internal improvement to other parts of the State.

Resolved, That the extraordinary exertions made by other States, to divert the trade of the West to Philadelphia, Baltimore and Boston, warn us not to rest in our career, but to increase the facilities of internal commerce through this State, so as to give full effect to its great natural advantages.

Resolved, That the success of these exertions, in augmenting the trade of Philadelphia and Baltimore, fully proves that a new impulse must be given to the system of internal improvement in this State, in order to keep pace with the growing business of the country.

Resolved, That we approve of the Convention to be held at Utica on the eleventh of November, by the friends of internal improvement, as a means of informing the public mind, and of concentrating the energies of the State in favor of those objects best deserving the public support.

Resolved, That thirty delegates be appointed to represent the City and County of New York in that Convention.

The following individuals were thereupon appointed by the meeting, with power to fill vacancies:

E. T. Throop,	Charles H. Russell,
Philip Hone,	Jas. B. Murray,
D. B. Talmadge,	H. W. Hicks,
Charles H. Hall,	Jona. J. Coddington,
Morgan L. Smith,	J. W. Leavett,
A. B. Meech,	Seth Grosvenor,
Eli Hart,	Geo. S. Robbins,
B. B. Howell,	Jno. R. Peters,
Henry Seymour,	Jos. Blunt,
Curtis Bolton,	Francis Ficket,
Nicholas Dean,	Henry Yates,
Wm. C. Wales,	Gideon Lee,
Thos. Burlock,	Jona. Goodhue,
Charles G. Ferris,	Goold Hoyt,
H. H. Elliott,	D. C. Colden,

On motion, it was then Resolved, That the proceedings be signed by the Chairman and Secretaries, and published.

CORNELIUS W. LAWRENCE, Chairman.

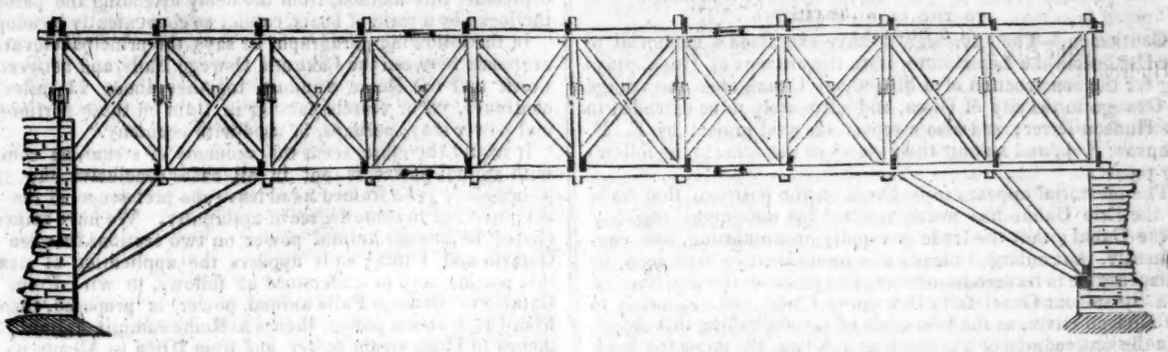
SAUL ALLEY, } Secretaries.
CALEB BARSTOW, }

November 2d, 1835.

REAL ESTATE IN CHICAGO.—The American of 17th ult. says:

"A lot fronting 100 feet on Dearborn street about 55 feet deep, next the corner of Water street, was sold a few days since for $11,000."

COL. LONG'S PLAN OF BRIDGE BUILDING.



The annexed plan of, and certificates in relation to, Col. Long's Bridge, has been several months in our possession, and ought long since to have been laid before our readers. We publish a part of the certificates accompanying the drawing, which give an idea of the estimation in which the plan is held by practical men.

The undersigned, agent for Col. Long of the U. S. Engineers, offers to all persons interested in Bridges, as is believed, the most important and latest improvement which has yet been made in bridge-building.

The plan of building is such as to bring into profitable use timber of any length, and to build at any length of span from 20 feet to 300 feet between bearings.

Among the important advantages possessed by Col. Long's bridges over others, the following are believed to be peculiar to his:

All the strain on the important timbers is length wise; and this too without any material strain or thrust against the the abutments.

Any defects which time shall make, can be repaired with the same facility as the putting in of the original timber.

The work is so well secured as to admit of driving at any speed, with perfect safety, and without injury to the structure.

A great number of bridges built on this plan are already in use in the Eastern, Middle, and Western States; all of which have fully answered the most sanguine expectations of the Architects and Proprietors. MOSES LONG.

The following selections are from the numerous recommendations of Col. Long's plan of bridge-building:

"*Baltimore and Susquehannah Railroad Office, January*, 1833.—Messrs. Hassard and Curley have constructed for this Company three bridges upon the plan of Col. Long, two of them about 70 feet in length, and the largest 100 feet. I am well acquainted with the different plans that have been adopted for the construction of wooden bridges, particularly Towne's and Burr's, which have been generally used in this part of the country, and I am satisfied Col. Long's plan is superior to any of them, in point of strength, solidity, permanency, and above all, in the facility with which it can be repaired, by replacing any piece of timber without disturbing the structure, so that by constant slight repairs the bridge will be perpetually renewed, at a very slight expense.

"These bridges have been passed more than five months, with a steam engine and tender weighing at least ten tons, with heavy trains of carriages attached, without causing the slightest perceptible motion of any kind in the bridges, which remain in the exact position they occupied when first erected.

"My opinion in respect to these bridges is sustained by the whole Board of Directors, amongst whom there are several gentlemen who possess much theoretical and practical knowledge on this subject."

(Signed) GEO. WINCHESTER, President.

"The bridges above mentioned were built in conformity to my directions, as also several others on other works under my charge, and I fully concur in the opinions expressed by the President of the Baltimore and Susquehannah Railroad Company, in favor of Col. Long's plan of bridge-building."

(Signed) WM. G. McNEILL, Captain Top. Engineers.

I hereby certify that under the direction of Col. J. M. Fessenden, the Engineer of the Boston and Worcester Railroad, a bridge has been constructed on that Railroad over the Charles River, on the principle of Col. Long's patent. The bridge rests entirely on two abutments thirty feet in height, and has a span of a hundred and twenty feet between the abutments. Notwithstanding the distance between the abutments which are the only points of support, it has been found to be remarkably stiff, and free from yielding or oscillation on the passing of the heaviest loads, which often consist of eight or ten loaded cars, in addition to the locomotive engine and tender. It was built by Mr. Thomas Hassard of Baltimore, and has been standing a little more than a year. It is considered by the Directors of the Railroad quite satisfactory both in principle and in workmanship, and remarkably well adapted from its firmness and apparent strength, for a Railway bridge.

(Signed) NATHAN HALE, President of the Boston and Worcester Railroad.

Boston, Dec. 11, 1834.

MOSES LONG, Esq., of Warner, N. H., is the agent of the patentee.

We understand, says the Montreal Gazette, that about £14,000 of the stock of the HAMILTON and PORT DOVER Railroad Company, has been already subscribed for, and as by the Act of Incorporation, they are empowered to break ground, whenever £10,000 shall have been paid in, we shall doubtless have soon to report that such a commencement has been made.

An excellent harbor is now in progress at the extremity of the Road at PORT DOVER. As it will be open on an average six weeks earlier than that at BUFFALO, the originators of the Railway anticipate that a considerable number of AMERICANS who are annually moving to OHIO and MICHIGAN, will, rather than incur the expense attendant upon remaining till the navigation opens on their own side, take advantage of the communication between HAMILTON and *Lake Erie*.

Another source of profit to the Railway, will be the transport of produce from the extensive and rich country lying to the west and south-west of HAMILTON.

☞ Now the election is over, says the Rutland, Vt. Herald, we must attend to the "weightier matters."

OUR RAILROAD must be promptly attended to. By notice in another part of this paper it will be seen, that on Tuesday next (the 8th) the Books for subscriptions to the stock of the Rutland and Whitehall Railroad, will be opened in this town, and on the 15th at Whitehall.

We are often inquired of whether we think the stock of this Road will be taken up, and the project go into operation. We here take occasion to say, once for all, that we have scarcely a doubt but what this Road will be made, sooner or later.

The Board of Directors of the Grand River Navigation Company, have given publication to a resolution lately adopted by them—that the first Steamboat, of not less than fifteen horse power, that shall ply on the *Grand River*, from DUNNVILLE to the head of the navigation, when opened, shall be allowed to pass toll free through the locks, as long as she shall ply thereon—and that the two first covered barges, to cost not less than £250 each, and built to ply regularly and constantly on this navigation, shall, in like manner, pass free of toll.

IMPORTANT DECISION.—The well known *Attachment Cases*, of John Randel, against the Garnishees of the Delaware and Chesapeake Canal Company, were decided in the Court of Errors and Appeals, at Dover, on Friday last. The Chancellor delivered the opinion of a majority of the judges, and the Judgment of the Court in favor of the Plaintiff. This decision establishes the right of Mr. Randel to attach the tolls in the hands of all captains of vessels entering the Canal.—[New Castle (Del.) Gazette.]

CONVICTION FOR PERJURY.—At the late court for Portage county, Ohio, Col. W. B. Washington was convicted of perjury, and sentenced to seven years imprisonment. He was a man of standing and property, whose avarice prompted him to commit the perjury.

With such a *name*, to commit such an act, is to sin against all influences. We hope the Legislature of the State possesses the power to change the man's name—since that name could not save him from perjury.—[U. S. Gaz.]

Letter from John B. Jervis, Holmes Hutchinson, and Frederick C. Mills, relative to a Ship Canal from Utica to Oswego.

TO THE CANAL BOARD.

Gentlemen,—The undersigned have examined a memorial to the Honorable the Legislature, from the citizens of Utica, praying for the construction of a Steamboat Canal, from the village of Oswego to the city of Utica, and ultimately to be extended to the Hudson River; and also a report on said project by E. F. Johnson, Esq., and submit their views of the same in the following report:

The memorial appears to be based on the position, that trade on the Erie Canal has nearly reached the maximum capacity of the Canal; that the trade is rapidly accumulating, and consequently, that enlarged means of communication will soon be indispensable to its accommodation, and proposes the construction of a Steamboat Canal from Oswego to Utica, and ultimately to the Hudson River, as the best mode of accomplishing this object.

In the proceedings of the meeting at Utica, the projected work is called a Ship Canal; but in the memoaial from the same place, it is called a Steamboat Canal. In the proceedings of the meeting, and in the memorial, it is regarded as designed to afford navigation to vessels navigating Lakes Ontario, Erie, &c.

The dimensions of the proposed Canal, as given by Mr. Johnson in his report to which the memorialists refer, are 8 feet depth, 58 feet width of bottom, and 90 feet surface of water; and the locks to be 130 feet length of chamber and 30 feet in width.

From the width of the locks we conclude the Canal cannot be designed to accommodate the steamboats of Lakes Ontario and Erie: we are therefore left to infer, that the steamboats are to be adapted to the Canal, and used to tow the vessels that may be used in the navigation of the Lakes.

The memorial represents the future trade of Lake Erie, as the leading and prominent object to be secured by the proposed Canal, and which cannot be retained for any great length of time by the Erie Canal, on account of its limited facilities for transportation, as compared with the prospective magnitude of this trade. Mr. Johnson proposes to construct the Ship Canal, and anticipates the enlargement of the Erie Canal west of the intersection of the proposed "Steamboat Canal," to 6½ feet depth and 60 or 70 feet surface of water.

To the undersigned it appears that if the Erie Canal needs relief, it will first require it for its Eastern section, which is obviously under the greatest burthen.

To open a steamboat navigation from Oswego to Utica, would leave 110 miles of the Erie Canal, which is most crowded, under at least the same embarrassment, that would otherwise burthen and impede its navigation. But the question which part should be first opened, may not be deemed essential to the present inquiry; it is sufficient for us, that the memorial contemplates a Canal from Oswego to the Hudson; and we shall of course take that view of the subject.

The memorial and report assume that the proposed Canal will afford the means of a cheaper and more expeditious transportation than can be effected by any other route. A small saving of time and expense in a trade of the extent we may anticipate, is doubtless an object of great importance. That the trade from Lake Erie, which will seek an Atlantic market through the central part of this State, will be large, and that the Erie Canal, in its present condition, will be inadequate for its accommodation, at no very distant period, we do not doubt. This position is fully taken by the Canal Commissioners in their recent report on the improvement of the Erie Canal, and also by the Canal Committee, in their recent report made to the Assembly. In our opinion, this view is so clear as not to admit of any reasonable doubt, and of course any elaborate argument to settle its magnitude is deemed to be uncalled for, from us, if not superfluous in itself; we therefore proceed on the ground that this position is fully admitted.

It appears necessary to a correct understanding of the subject, that we ascertain the definite character of the projected Canal. As before observed, it is called a "Steamboat Canal;" and we have been led to suppose it was designed for steamboats especially adapted to its navigation, and which would be too small for the large Lakes, but would tow on the Canal, the freight boats that would be towed by larger steamboats on the Lake. It also seems contemplated by the report referred to, that sail vessels will be used to some extent on the proposed Canal, as the tonage of such as are deemed suitable for the size of the Canal is given, with that of freight barges, and the time of making the passage on Lake Ontario is stated to be the average between sail and steam vessels. Mr. Johnson, after stating that experiments in navigating small Canals by steam had hitherto failed, seems to think that it can be successful on large Canals, and in reference to the one under consideration, gives his opinion as follows, page 56: "That it can be so applied, on the portion of the proposed Canal from Utica to Oswego, I do not entertain a doubt." In the next paragraph he says, "Where there is much lockage to be overcome, this method, from the delay attending the passage of the locks by a train of boats, cannot so conveniently be adopted."

In the following paragraph, he says the principal elevation is overcome between the Lake and Oswego Falls, and between Fish Creek and the Rome Summit, together about 22 miles; and continues, "For vessels passing in train on these portions, animal power may, perhaps, be used with economy."

It would therefore seem the economy of steam, as compared with animal power, is not in all cases conclusive, though the phraseology is so framed as to leave the preference of the engineer involved in some degree of ambiguity. We have rather concluded he intends animal power on two sections between Lake Ontario and Utica; so it appears the application of steam on this portion may be understood as follows, to wit: From Lake Ontario to Oswego Falls animal power is proposed, thence to Fish Creek steam power, thence to Rome summit animal power, thence to Utica steam power, and from Utica to Albany no opinion is given whether steam or animal power is intended. If the same qualifications, as made above, may be inferred from the question of lockage, we must conclude that the section of the "Steamboat Canal" extending from Utica to the Hudson will be navigated by animal power. We have been thus particular in order to obtain, if practicable, some standard character for the projected Canal. The appellation of "Steamboat Canal," gives the impression that it is designed to be navigatad by steam power; but in detailing the project, the engineer seems to modify this character so materially, that we are left to suppose it was at least doubtful in the opinion of Mr. Johnson, whether animal or steam power would be the most economical on a large portion of it. It is, however, urged in general terms, both in the memorial and report, that steam power may be used on the Lakes and Canal with great advantage, and that by this means transportation will be effected with greater celerity and economy than by any other route. We find some embarrassment in meeting the subject for the want of a specific exposition of the plan or method by which the object of the project is to be accomplished, and shall be compelled to follow it more at length than would otherwise be necessary. The great importance of providing for the trade of Lake Erie will, we trust, be a sufficient apology for what may be a somewhat lengthy examination.

It has been shown the proposed Canal was not adapted to the steamboats that navigate the larger Lakes. Consequently to use Lake steamboats in any other way than by towing barges, would make transhipment necessary, and thereby sacrifice one of the prominent objects claimed for the improvement. Mr. Johnson proposes the towing plan on Lake Ontario, and of course to avoid transhipment the same plan must be adopted on Lake Erie. This method of navigating has been very successfully practised on the Hudson River: on the larger Lakes, though a great number of steamboats have been in use for several years, the plan has not been adopted, for the reason, that the steamboats cannot manage barges in a storm. We have been informed of a proposition made to the proprietors of a steamboat, to take some Canal boats from Buffalo to Cleaveland; and it was accepted *only* on the condition that in the event of a storm, they should be at liberty to cut them loose at the risque of the owners.

An intelligent gentleman of several years experience in navigating steamboats, and the last two seasons on Lake Ontario, informs us that he considered it impracticable, as a regular business for steamboats on the Lakes, to tow vessels with safety, unless the vessels were fitted with masts and rigging, and manned sufficient to be conducted by sails in a storm; the storms often rise very suddenly on those Lakes, and with such violence as would compel a steamboat to cut loose vessels in tow in order to sustain herself.

Steam power as adapted to navigation has been known for many years, and we are not aware that any material improvement has recently affected its economy. It has been in the hands of an enterprising people, who would not be slow to discover its adaptation to any useful modification in the economy of navigation: and when we consider the broad hint given on the Hudson, we are led to the conclusion, there is some difficulty in the economical application of the towing system on the great Lakes. No fact or reasoning is given in the memorial or report, to show that the difficulties had in any respect been obviated, and we are led to suppose there are none. We are therefore brought to the conclusion, that transportation on the Lakes must be done by sail vessels, or on *board* the steamboats. We suppose schooners might be towed by steamboats, and thereby render the passage shorter and more certain; but whether the saving of time would pay the extra expense, we are not informed.

In regard to the use of steam power on the proposed Steamboat Canal, we have observed a want of perspicuity in regard to what was designed. Mr. Johnson (page 54) gives the speed on the proposed Canal at 5½ miles per hour, and after a few remarks,

alludes to the use of steam on the Canal as a means of effecting greater expedition than can be obtained on the Erie Canal route. In the next page, after giving a list of prices of transportation, he remarks on the great difference in favor of wind and steam upon the larger waters, as compared with a Canal: and immediately alludes to the contrast between the cost on the Hudson River and the Erie Canal; in the next page he says, an important saving in expense is likewise anticipated by the use of steam as an impelling power. The memorial takes the ground that steam is best adapted to the Canal, and draws comparisons between its use on the Hudson River and Lake Erie, and the navigation of the Erie Canal. The manner in which the question of the applicability of steam power to the navigation of the proposed Canal is treated, both in the memorial and report, is calculated to give the impression that it is an important consideration, and we therefore propose to examine it.

In making a comparison between the cost of transportation on Canals, Lakes and Rivers, to determine what power is the best economy, it is clearly proper the item of tolls should be kept out of view. For although the entire cost of transportation will be affected by any change of tolls to which the mode of conveyance may be subject, still, they form no part of the expense of propelling power, and therefore it is evident they are to be excluded in determining between the ecoomy of the kinds of power used. We have procured the following statement of charges for transportation, which are exclusive of toll on the Canal:

For flour per ton per mile,

Hudson River by steam towboats, (145 miles,)	8	mills.
Erie Canal, (363 miles,)	8.9	"
Erie Canal, (269 miles to Rochester,)	9.2	"

The above prices have been recently established.

We have no prices for steam on Lake Erie or Lake Ontario since those of 1834.

Merchandize per ton per mile,

Hudson River, steam towboat, (recent tariff,)	15.1	mills.
Erie Canal, (recent tariff,)	21.5	"
Buffalo to Detroit, (350 miles, for 1834,) by steamboat,	37.4	"
Oswego to Lewiston, (146 miles,) by schooners and steamboats, as per 1834,	29.0	"

The above includes port charges, and as these are the same for long and short distances, they will modify the ratio above indicated in proportion to the distances; and the Canal will also be affected by its lockage.

The distance on Lake Erie and the Erie Canal are nearly equal, and will afford a fair comparison, except the inconvenience of locks. The Hudson and Ontario navigation is less than half the Canal in length; but it is considered the locks on the Canal are nearly if not quite equivalent to its advantage in length; at least, it cannot be materially different from this; and we may take the prices as a fair indication of the relative economy.

On the Erie Canal, flour is found to be very near the average of all the freight: In this article it appears the cost of animal power on the Canal is 12 per cent. greater than steam power on the Hudson, and for merchandize, 42 per cent. greater. The agricultural products, including ashes, which range much the same as flour in price of freight, are in quantity, as compared with merchandize, about 2½ to 1, making the average cost of transportation on those articles 21 per cent., or say one-fifth greater on the Canal than on the Hudson River. The prices on the Lake steamboats that carry the goods on board, are above the Canal prices; and we do not think it necessary to make any further statements in relation to them at this time. Perhaps there are no waters better adapted to the steam towboat method of navigation, than the Hudson River; and yet the price of navigation by animal power on the Erie Canal is but 21 per cent., or one-fifth greater, instead of three to one, as stated in the memorial and report before referred to.

The Erie Canal is small, and the traction of boats that navigate it, is from 30 to 45, and most usually about 40 per cent. greater than would occur on a Canal of the most favorable size for the boat used: If it was adapted to the most favorsble navigation of boats of 100 to 150 tons, only a small proportional increase would be required in the expense of men to navigate them; and it is believed the transportation by animal power on the projected "Steamboat Canal," could be effected at half the present cost on the Erie Canal, which would reduce it to about two-thirds of steam power on the Hudson. It should be observed the speed on the Hudson is from 2 to 3 times greater than on the Canal. If we add the toll on the Canal, the cost of Canal navigation will be increased; but as before observed, this should not be included in determining the relative cost of the power used, which is our present object. If steam power was used at a lower velocity on the Hudson, it is believed it would be more economical; this, however, would make it less profitable in regard to passengers, and perhaps freight would not be much reduced, if the passenger business was sacrificed for the lower speed; another consideration has an influence in this case; steamboats of small power would not be able to manage their barges in the broad parts of the river in heavy blows. But on the presumption they had a uniform smooth surface to navigate, they could doubtless be made to effect transportation, that alone being considered, at a low velocity, for less cost than at present. The amount of this reduction will in some measure depend on circumstances; and especially in its application on the proposed "Steamboat Canal," where the dimensions are so much below the broad sheet of the Hudson, that we can hardly indulge the hope of reducing it materially below what it now is, on that river.

It has heretofore been considered that the agitation of the water, produced by the paddles of steamboats in Canals, was too severe in its action on the banks; and hence we find that even in England, where steam power is much cheaper in proportion to animal power, than in this country, they adopt animal power generally, not only "on small," but also on LARGE Canals: we are not aware of any instance of the use of steam power on Canals, unless it be to pass comparatively short sections that intervene in the navigation of larger waters.

The detention and consequent increased expense of steam power in passing locks when used for towing trains of boats on Canals, must ever constitute a serious objection to its use.

In view of the whole subject, we are led to the conclusion, that experience has thus far shown animal power to be not only best adapted to propelling boats on Canals, but when applied to both large and small Canals is more economical than steam power.

In speaking of the application of steam power to Canal navigation, Mr. Johnson calls it a "great and growing power of the arts." We should not allude to this expression, if we did not believe it was calculated to give an impression of the prospective importance of providing for the use of steam power, that is not warranted from experience. That steam is a great power, no one will question: Whether it has reached the full development of its efficiency, we shall not attempt to determine. Since the days of Watt and Evans, the ingenuity of scientific and practical mechanicians have been largely put in requisition, to improve this truly noble engine of art; many patents have been obtained; the working gear has been made more convenient and efficient; the condensing engines have been made to condense more perfectly; the application of its power to the work performed has been made more direct, simple and efficient; the workmanship of its machinery has been improved, and some increase has been given to the economy of its boilers, in generating steam. But the great principles of the engine remain materially the same as left by those distinguished men. The application of this power is now made with great simplicity; and we see no reason to believe there is well founded probability of any such improvement in its application to navigation, as will warrant a reliance in laying the foundation of a project that will cost millions, and be intimately connected with a great public improvement.

As a general principle, steam, when employed for stationary purposes, is much more economical than animal power, and is peculiaraly so where fuel is cheap. There are reasons, however, that materially affect its comparative economy when employed in locomotion; but we do not suppose we are called on to make an exposition on this point. The facts given are the result of much experience, and these we deem to be the only proper basis in laying the foundation of extensive public works. It is easy to conjecture that the time may arrive when steam power may be used with economy on the long levels of large Canals; but it is believed a careful examination will show the probability to be too remote to justify any considerable expenditure at this time.

From the preceding examination we are irresistibly led to the conclusion that the use of steam power, on the proposed improvement, from Lake Ontario to the Hudson, is inexpedient, except where it may be important to avoid the expense of a towing path, which we believe will only occur on the Oneida Lake, a distance of 21 miles.

It should be kept in view that we have been considering the subject in regard to the comparative economy of steam and animal power on Canals; and that this does not determine the entire cost of transportation. Canals are the works of art, and involve expenses of construction and maintenance, which must be reimbursed in the shape of tolls charged on the freight, while natural waters are free from such expenses. And, although the expense of navigation may be greater than on a Canal, exclusive of tolls, still the natural navigation pays no tolls, and in regard to the total cost, may therefore be, and often is, the cheapest.

The question in regard to the application of steam power on the proposed "Steamboat Canal," being, as we believe, conclusively disposed of, we proceed to consider another peculiar feature, which the memorial considers of great importance, to wit: The means of affording a passage for Lake vessels, to proceed directly to the Atlantic markets. In order to avoid transhipment

we have shown this must be done by vessels adapted to the use of sails on the Lakes.

The memorial contemplates effecting the transportation between Lakes Erie and Ontario through the Welland Canal. Mr. Johnson, in his report, speaks of the distance from Buffalo to Lewiston in his calculation of time, and in his locks provides for a larger vessel than can pass the locks on the Welland Canal. We presume that a link in so important a chain of navigation would not be left in the control of neighbors, who are proverbial for taking care of themselves; we therefore proceed on the presumption, that a Canal for Lake vessels will probably be required from somewhere near Buffalo or Black Rock to Lewiston, in order to perfect the scheme.

The first inquiry will be to determine the relative cost of Canal transportation by vessels adapted to the navigation of the larger Lakes, and by boats adapted exclusively for a Canal of the same dimensions as the proposed "Steamboat Canal."

In his report, Mr. Johnson proposes to accommodate the navigation to schooners of 160 tons, register measure, which would be equal to at least 200 tons, actual tonnage.

This is believed to be considerably larger than is generally used in the navigation of Lake Ontario, though perhaps not larger than vessels on Lake Erie; but he has chosen this size, and as it will not materially affect the comparative view, we follow out the question on the position he has assumed. He adopts 30 feet as the width of his lock chamber, partly to accommodate the Erie Canal boats in pairs, and further says, it is "but little, if any, greater than would be required for vessels of suitable proportions for Lake service, drawing 7 feet water."

The length of beam is not given, but from the size of the lock we infer that it must be from 26 to 28 feet, and that the vessel will have a transverse section, at her midships, below low water line, of at least 150 feet, and will probably be something more, but the data are not full, and we wish to give the schooner all she is entitled to in the comparison, and therefore adopt this as her transverse area.

A Canal boat 104 feet long, 16 feet wide, drawing 7 feet water, will carry 200 tons burthen, and require a lock 115 feet in length and 17 feet width of chamber, sectional area of boat below load water line, 108 feet. The weight of the schooner, including her furniture, in proportion to the load she will carry, may be taken as 3 to 4, making the gross load of vessel and cargo 350 tons.

In regard to this ratio we would observe, that we find in Rees' Cyclopedia, art. ship building, an estimate of the weight of a 74 gun ship, and the burthen as follows, to wit: The vessel, including hull, masts, rigging, anchors, cables, and all that is properly the ships furniture, for the sailing and government of the vessel, to be 1,579 tons; and her armament, ballast and complete loading, 1,250 tons. We also find an estimate under the same authority for an East India ship of the most approved model, by which it appears the weight of ship and furniture was 811 tons, and her registered tonnage 999 tons, and the actual weight of a full cargo, 1,217 tons. A practical ship builder, in Albany, of much experience, (Mr. Annesley,) informs us that the usual estimate for sail vessels for merchant service, is as 1 to 1; that is, the vessel will weigh equal her registered tonnage. We therefore suppose the ratio of 3 to 4 will be a fair medium.

Canal boats constructed with reference to frieght merely, will generally weigh, in the ratio of their cargo, as 4 to 9.

If large boats will hold the same ratio of those used on the Canal, and we see no reason why they should not, then the boat of 200 tons will have a gross load of 289 tons. The gross load of the schooner will therefore be (61 tons,) 21 per cent. or 1-5 greater than the canal boat.

The power required for traction, will be in proportion to their transverse section, provided they hold equal or similar ratios to the transverse section of the Canal, or if the Canal is equal in both cases to an unlimited expanse of water. The ratio of schooner to Canal, is as 1 to 3.94: the ratio of canal boat to Canal, is as 1 to 5.48. The relative power of traction, (deduced from the formula of Du Buat,) for equal sections, will be as 100 to 125. The ratio of the sections of boat and schooner are, 100 to 138; and we have, therefore, the ratio required for the boat and schooner, as 100 to 167.5, or the schooner will require, (67 per cent.) 2-3 more power to tow her than is required for the boat.

We have been informed that schooners of 100 tons burthen, cost on Lake Ontario $4,000, and that canal boats constructed exclusively for freight of equal burthen, will cost $1,400; pursuing the same ratio, the schooner of 200 tons would cost $8,000, and the canal boat $2,800, for the same tonnage. The ratio of cost is as 100 to 285, or the schooner will cost nearly three times as much as the canal boat. The schooner being over 50 per cent. wider than the boat, and having a section much larger, (near 40 pr. ct.) in its ratio to the Canal, will be managed with more difficulty, be more liable to come in contact with other vessels, and the sides of the Canal, and will consequently be exposed to greater wear.

The gates for the schooner locks will be nearly double the size of those for boats; will work more heavily, be more liable to injury, and consequently be more expensive to manage and to maintain.

In view of all the circumstances that affect the cost of transportation as above presented, we have come to the conclusion, that the cost of transportation on the proposed Canal, by schooners, will be 75 per cent. more than by boats made exclusively for Canal navigation. This is exclusive of the expense of loading and unloading.

The cost of transportation, by canal boats on a canal of the dimensions of the proposed "Steamboat Canal," it is believed, will not exceed 5 mills per ton per mile; but we will assume it at 6 mills: and by the ratio above stated, the cost per schooner, will be 10½ mills. In view of the great amount of trade that may be expected, and the encouragement we may suppose the State will be disposed to afford, for more effectually securing the same, it is presumed the tolls will not be more than an average of 5 mills per ton per mile, which would be a trifle over half the present tolls on the Erie Canal. Upon this basis, the cost of transportation by schooners, including toll, would be 15½ mills per ton per mile. The canal boats not being adapted to lake navigation, must be charged with the expense of transhipment at Oswego; from this place they may proceed to the Hudson, and then be taken in tow by a steamboat, for which they will be well adapted, and proceed to any market on that river. The cost of transhipment from one vessel to another, when a large business is done, as at Albany, is effected without any material warehouse charges; the port expenses are therefore, for transhipment from one vessel to another. Men that have been extensively engaged in this business at Aleany, inform us, that 15 cents per ton will pay all expenses of transhipment, including cooperage and other repairs to casks and boxes, that is made necessary in transhipment. We propose to put this at 25 cents per ton, which appears to be a liberal allowance for all contingencies. We are aware the port charges would be about double this sum if the freight generally required warehouse expenses; but we suppose a large business at Oswego, would produce the same result as it has at Albany.

The charges for transportation from Oswego to the Hudson by schooner, will be per ton per mile—

202 miles at 15½ mills, ...		$3.13
By canal boat—		
202 miles at 11 mills, ...	$2.22	
Transhipment at Oswego, ...	25	
		2.47
Difference in favor of boat, ...		66

We have supposed toll to be charged through Oneida Lake in both cases, and the same toll is charged on both vessels; though the extra expense in managing the pivot bridges, would require a higher toll on schooners than on boats.

If the Canal was comparatively short, the expense of transhipment would throw the superior economy in favor of schooner navigation. As for instance, from Buffalo to Lewiston there could be no doubt of the superiority of a navigation by schooners.

The navigation of the Canal by schooners requires the passage from one side of the Canal to the other by pivot or draw bridges, for public roads, and for the accommodation of farms; Mr. Johnson proposes "scows or floats, securely moored in basins formed out of the main range of the Canal." He says, between Utica and Rome, there is "*upwards* of 20 farm bridges." Between Utica and the Little Falls there is a fraction over 3 farm bridges per mile, for 22 miles. It would be easy to form basins for these floats on the berm side of the Canal; but basins on the towing-path side will require to be bridged. The inconvenience to the land owner, in using this method, where the passage of vessels will be very frequent, and the liability of the floats to get loose and be driven about and destroyed by the vessels navigating the Canal, the expense of maintaining so great a number of towing-path bridges, under the wear to which a large business will expose them, together with the inconvenience to which the navigation will be at times liable from this plan, render it in our opinion very objectionable. To pursue any other course would involve heavy expenses for damages, particularly in the valley of the Mohawk, where the Canal would generally divide the upland from the intervale, leaving the latter between the Canal and the River. The intervale lands rarely afford good situations for buildings and Roads, and would not make desirable farms without some portion of upland. The Canal would not therefore be readily adopted as a boundary of property.

The accommodation for public Roads must be by pivot or draw bridges. When a small number of vessels pass daily, a draw may be used without any great inconvenience to common Roads; but if we look forward to the trade contemplated to float on this great thoroughfare, the great inconvenience to the common Roads and the navigation from crossing by this method must be apparent. And in large towns and villages the communication between the two sides of the Canal would be peculiarly perplexing and disad-

vantageous: though there are difficulties, we by no means consider this method of crossing the Canal impracticable; but have thought it incumbent on us, to point out the inconveniences that are inseparable from the plan.

The lock that is required for the schooner, in order to provide for her peculiar form and rigging, is necessarily longer and wider than required for a canal boat of equal tonnage; and we find the lockage water for the same tonnage to be (99 per cent.) nearly, and we may say double for the schooner that is required for the canal boat.

The calculation for traction has been made with reference to the vessels moving at the same velocity. If, however, it should be desired to increase the speed at some sacrifice in the price of freight, it could be done best with the canal boat, as its ratio of section to the Canal is more favorable than that of the schooner. Mr. Johnson, in making a comparison between this route and the Erie Canal, puts the velocity on the Erie Canal at 2½ miles per hour, and on the proposed "Steamboat Canal" at 5½ miles per hour. The sectional area of the Erie canal boats, on the average, have a ratio to the transverse section of the Erie Canal full as favorable as the schooner to the proposed Canal. We suppose he contemplated steam power to enable him to obtain this superiority in speed, which, by the usually received principle of computation, would require nearly 5 times as much power as a speed of 2½ miles per hour. The sectional area of the schooner to the Canal is as 1 to 3.94, and for a vessel of this size, having this ratio to its Canal, would be moved at this velocity only by a greatly increased expense of power, and would produce such a wave as to throw the water of the Canal over banks of the usual height, and in a short time destroy any ordinary protection that could be given them. We do not therefore see any ground to support this position; on the contrary, the inconvenience of managing large lock gates will produce more delay in passing them than would happen with small ones; and the only advantage in point of time is in the transhipment, which we suppose may be equal to one day over the gain by the boat in passing locks.

We are brought to the following conclusions, to wit: That schooners would gain, by saving transhipment, one day in navigation between Oswego and Albany.

That the cost of transportation would be 66 cents per ton greater than by boats.

That schooners would require double the quantity of lockage water.

That in consequence of the necessity of draw bridges a schooner navigation would greatly discommode the ordinary inter-communication of the country through which it passed.

That the use of steam power is inexpedient.

In regard to the construction, we have no doubt of the practicability, but we are unable to say any thing definite in relation to cost. To do this properly, the plans of the work, not merely in general, but in detail, should be settled, and a careful location and measurement of the contents of the several parts of the work made. Experience has proved that no great reliance can be placed on cursory surveys; the general practicability of a project may be ascertained, but the particulars are highly essential to a knowledge of the cost. We believe a work requiring large expenditures, and when the expense would probably have a material influence on the question, whether it should be undertaken, should have a full examination before any professional opinion should be given in relation to its cost.

The projected Steamboat Canal occupies 127 miles of the Erie Canal route extending from the Hudson to 2 miles west of Rome; and as before observed, Mr. Johnson anticipates its enlargement from the point of divergence near Rome, westward, to 6½ feet depth of water, and 60 or 70 feet width at the surface. Now, we propose for comparison, that this enlargement shall be extended to the dimensions of the proposed "Steamboat Canal," to wit: 8 feet depth of water, and 90 feet width at surface. This would give a large Canal from the Hudson to Lake Erie. To compare the cost of transportation from Albany to Buffalo on this route, with that by Ontario, we must inquire into the cost of transportation on Lake Ontario. This has been stated at 29 mills per ton per mile for merchandize, as per rates of 1834, given by Mr. Johnson. A forwarding merchant connected with the Oswego line, (Mr. Griffith, of Troy,) informs us, the price of freight from Oswego to Lewiston, is 20 cents per hundred. Capt. Vandewater, of the Steamboat United States, on Lake Ontario, says he has carried freight at 15 cents per hundred, each way, for the last two years. That the price by schooner is about the same. He gives it as his opinion, that if they had plenty of freight, that steamboats would carry for 15 cents up and 12½ cents down, and schooners for 12½ cents up and 10 cents down. To put the average at 10 cents, and allow 2 cents for port charges, would bring the cost to 8 cents per hundred for the freight over Lake Ontario, which is probably as low as we can anticipate for an average rate by schooners. This will give per mile, from Lewiston to Oswego, (146 miles,) 10.9 mills per ton per mile. The cost from Buffalo to Albany, will then be by schooners—

Buffalo to Lewiston, 30 miles, Canal at 15½ mills,		$0 46½
Leistown to Oswego, 146 miles, Lake, at 10.9,		1 59
Oswego to Albany, 202 miles, Canal, at 15½,		3 13
		$5 18½
By Canal boat—		
Buffalo to Albany, 363 miles, Canal, at 11 mills,	$3 99	
Transshipment at Buffalo,	25	
		4 24½
Difference in favor of Erie Canal,		94

If the charge for transportation by the boat is raised to 8 mills, and the tolls also to 8 mills per ton per mile, then the comparison will be as follows, to wit:

Ontario route,	$6 60
Erie Canal route,	6 65
Difference in favor of Erie Canal,	64

The time required, allowing 3 days as the average passage on Lake Ontario, which we are informed, is rather below the average for schooners, and 6 hours extra time in passing 30 locks more on the Ontario route than the Erie Canal, will be for the—

Ontario route—		
232 miles of Canal navigation, at 2½ miles per hour,	92.8	hours.
Extra time for 30 locks,	6	"
Lake navigation, 3 days,	72	"
	170.8	"
Erie Canal route—		
363 miles of Canal, at 2½ miles per hour,	145.2	"
Difference in favor of Erie Canal route,	25.6	"

If steam power was used on Lake Ontario, from 40 to 50 hours would be saved in time, making this route in time, about one day the shortest. This would of course be at an increased expense.

Whether the communication be made from the Hudson to Lake Ontario, or from the Hudson to Lake Erie, we are of the opinion, a Canal, designed for boats exclusively adapted to its navigation, and which may be towed by steamboats on the Hudson, will best accommodate the prominent interest involved in the great trade, for which provision is to be made.

In order to draw the comparison, we have taken a boat of 200 tons burthen; but we would observe, that we consider this to be larger than can be navigated, with the best economy, on the proposed Canal. Its sectional area, although much more favorable in its ratio to the transverse section of the proposed "Steamboat Canal," than the schooner we have considered, is still too large for the most economical traction. A Canal boat, designed to carry ordinarily 120 tons, and which could, when a pressure of freight demanded, carry 150 tons, we believe may be conducted with the best economy in transportation. A Canal having 8 feet depth of water, and 80 feet width at surface, with locks 10 by 115 feet chamber, could be navigated with the best economy by a boat carrying from 120 to 150 tons burthen. We are fully persuaded a boat of this capacity could be navigated on a Canal, suited to afford it the most economical traction, for the lowest price assumed in the computations above made. In regard to the size of Canal, we are aware, its ultimate capacity will, in a great measure, depend on the capacity of the boats that may navigate it. This, however, has its limit. The boat may be so large as to render its management inconvenient, and subject its navigation, in passing locks, to so much delay, as to diminish rather than increase the capacity of the Canal. The point which will afford the greatest capacity, can only be determined by experience. And in view of the prospective importance of the trade to be accommodated, the dimensions of the Canal should be settled, in our opinion, on a scale that will reach its utmost efficiency. In regard to proportions, we believe, that 80 feet width of surface, is as great a width as should be given for 8 feet depth; and if a larger Canal is deemed necessary or expedient, a corresponding increase in depth and width should be made. A deep Canal requires less water for evaporation than a shallow Canal of the same width; and if in contracting the width, the section is retained by deepening, we shall enhance this economy. The lockage water is also less in proportion to the tonnage, for a boat of greater than for one of less draught of water. Proper limits, however, are to be observed; the width should be such as to allow the boats easy space in passing each other; and it is highly important this should be liberal where the meeting is as frequent as may be anticipated. We are of opinion, that 10 feet surface is ample for each foot in depth.

Respectfully submitted.

JOHN B. JERVIS,
HOLMES HUTCHINSON,
ERED'K C. MILLS,
Civil Engineers.

Albany, 23d March, 1835.

The following account of the business of the Welland Canal is, we believe, from an Oswego paper.

It affords us pleasure to learn that the Welland Canal is gradually coming into greater use as a means of transit from Lake Erie and the vast Lakes and territory beyond it to Lake Ontario and the St. Lawrence. Though distant from us, we cannot fail to participate in the advantages of its success. In a few years hence we may safely prognosticate, that the Welland Canal will be no trifling feeder to the stream of commerce which will flow through our city to the other parts of the world.

By the following Monthly Report, it will be seen, that the business of the Canal is on the increase, and that there is a balance of £250 in favor of May, 1835, over the same month of 1834. There is a very great decrease in the export of flour and provisions, owing to the deficiency of the crops in 1834: but the increase in the export of other articles, and of merchandize imported, have augmented the Canal revenues beyond the corresponding period of the former year.

The powerful causes which are stated as being at present in operation to restrain the trade of the Western Country from falling into the natural channel of this Canal, as they are artificial, cannot reasonably be expected to be of long duration. The interest of private individuals will soon lead to the breaking up of so expensive a monopoly.

Monthly Report of the Board of Directors of the Welland Canal Company.

The Secretary reports the following Comparative Statement of Property passing through the Canal, in the months of May, 1834, and 1835, and the Tolls received thereon:

Articles.	1834.	1835.
Flour	4,330 barrels.	2,721 barrels.
Pork	5,872 do.	3,016 do.
Whisky	102 do.	291 do.
Salt	8,244 do.	6,146 do.
Wheat	25,840 bushels.	56,759 bushels.
Pipe Staves	17,900 No.	84,339 No.
West India do.	0 No.	18,479 No.
Square Timber	3,550 cubic ft.	57,311 cubic ft.
Boards	204,484 feet.	226,395 feet.
Saw Logs	2,574	5,925
Beer and Cider	0	374 barrels.
Shingles	0	8,000
Barley	0	1,748 bushels.
Gypsum	0	120½ tons.
Tobacco	37 hhds.	112 hhds.

Merchandise 437 tons 17 cwt. 2 q. 707 tons 15 cwt. 2 q.

	£	s.	d.
Amount of Tolls received to May 31, 1834,	672	11	6½
Do. do. do May 31, 1835,	922	15	2
Increase	£250	3	7½

Which, considering the season, presents a very satisfactory result.

From the information obtained by corresponding with those interested in the Trade, there is a very great diminution in produce for export, from the Western country. It appears the effects of the snow storm and frost on the 15th May, 1834, were far more injurious, and extended through a much greater range of country, than was anticipated.—Perhaps the loss of one fourth of the entire crop may not be an over-average, together with all the fruit, and the greater part of the nuts, such as acorns, beech nuts, &c. the loss of which can only be appreciated by those farmers, in the back country, having extensive droves of pigs. The farmers on the American side, are in the habit of threshing out their grain in the fall, and sending off all, except an immediate supply for the use of their families; which had a tendency to increase the general scarcity on the western side of those lakes, and created a demand for almost all the surplus on the Canadian side—consequently, very little produce can be expected to pass the Canal until the fall crops come in.—A very great increase of merchandise may be expected; and those interested in the navigation of this route, hold out the most flattering prospects for another season.

The only thing required, is to make the Canal a perfect navigation. Practical experiment has proved, what was always held out theoretically, that the natural local facilities presented by this route, would eventually command the trade of the Western country. It is true, many unforeseen causes have arisen to retard this result.

The trade of the Western country had been well organized and concentrated in Buffalo—many enterprising men were embarked in it, with any amount of capital they pleased to command—their lines were extended, on the opening of the Ohio Canal, to Portsmouth, on the Ohio River—and those Companies, together with the Mill-owners at Rochester, Black Rock, and the entire line of the Erie Canal, make extensive advances on produce, and secure it before its removal from the owners in Ohio—while we, on this side, being destitute of capital, and the consequent material to convey produce; unaided by capital and enterprise, which might naturally be expected from Montreal, must patiently wait until means are devised to place capital within our immediate reach—when the temporary and artificial trade heretofore wrested from us, will be restored to its natural channel.

The merchants of Oswego are an exception—they can command a capital proportionate to their numbers; and with a degree of enterprise and judgment which the command of capital generally insures, have built and are building, a large class of vessels—last year they proved profitable, and will, in all probability, continue to do so, as they command as much business as they are capable of performing.

The Board, feeling the importance of placing this navigation in the best possible state of repair, on a scale commensurate with the object, have entered into contracts for the delivery of the necessary materials to re-build such locks as may require it, and extend their dimensions to 24 feet, with a view of ultimately extending the whole to that scale.

The navigation will be kept open the present season, as long as vessels may continue to navigate.

By order of the Board,
JOHN CLARK, *Sec.*

Welland Canal Office,
St. Catharine's, July 1, 1835.

THE ISLAND OF NEW YORK.—We understand it is ascertained by actual survey, that this Island comprises thirteen thousand acres, and it is estimated that one thousand acres will eventually be added to it by extending into the rivers and the filling up of marshes—The first thousand acres is comprised in the line below Grand street, from river to river—from Grand street to twenty-first street there are two thousand acres. In these 3000 acres, it is supposed there are yet vacant lots sufficient to accommodate not only the whole present population of the Island but enough more to make up the number of 300,000—or the number of 100,000 inhabitants to one thousand acres, allowing about the same density of population that now exists below Canal street.—It may be seen from this, that the whole Island is capable of accommodating nearly a million and a half of inhabitants—and if our population continues to increase in the same ratio it has done for the last 30 or 40 years, the Island will be filled to its whole extent, in a period of less than half a century.—[Mercantile.]

The officer who pursued *Bowen* the smuggler, in a pilot boat, to England, returned in the Virginian, *re infectâ*, that is, without executing his object, as indeed it was perfectly certain before he started, that he would, unless, indeed, he had overhauled the ship in which *Bowen* was a passenger, on the high seas.

Application was made to the Secretary of the Home Department, for a warrant to arrest Bowen, but it was refused, on the ground that no treaty stipulations required such a course, and without them, it was wholly inadmissible; and in England, a man, however criminal, cannot be kidnapped under the forms of law, as we have instances of, in this country.

FIREMEN'S GUIDE.—A map of the city to 21st street has just been published by Desobry, 131 Broadway, under the direction of the Corporation, showing the fire districts, fire limits, public cisterns, stations of engines, &c., and an explanation of the direction of a fire, as indicated by the striking of the City Hall Bell:—

The city is divided into five districts, which are pointed out by the bell as follows:

1st District—One stroke of the bell.
2d District—Two do do.
3d District—Three do do.
4th District—Four do do.
5th District—A continual ringing.

The first District is comprehended by a line from the foot of Murray street to the City Hall, and in a line from the N. W. corner of the City Hall, parallel with the North River to 21st street.

The second District is bounded by the latter line, and a straight line from the Hall to the 3d avenue at 21st street.

The third District is bounded by the latter and a line from the City Hall to the East River above the Dry Dock.

The fourth District is bounded by the latter, and comprehends all the space between that and the East River as far down as Frankfort street.

The fifth District is all that part of the city below Frankfort and Murray streets.—[Commercial.]

[*From the Globe of Wednesday.*]

GENERAL NAVAL ORDER.—As a mark of respect to the memory of CAPTAIN WOLCOTT CHAUNCEY, late of the United States Navy, who died at Pensacola, on the 14th inst., while in the command of the Navy Yard and Station at that place, the flags of the Navy Yards, Stations, and Vessels of the United States Navy will be hoisted half-mast, and thirteen minute guns fired at noon on the day after the receipt of this order.

Officers of the Navy and Marine Corps will wear crape for thirty days.

MAHLON DICKERSON.
NAVY DEPARTMENT, 27th Oct., 1835.

THE SURPLUS REVENUE.—The large amount of the surplus revenue for the present year, and the prospect of a still greater one for the succeeding year, is attracting the attention of the public. In addition to the regular surplus of the next year, there will be six and a half millions of U. S. stock, with which something must be done. Ways and means must be thought of to get clear of it. We have heard it suggested that no inconsiderable portion of it might be employed in procuring materials, &c. for the augmentation of the navy; and when we saw the advertisement (which will be found in our paper) of proposals for the supply of of live oak timber for

5 Ships of the line,
6 Frigates,
5 Sloops of war,
6 Schooners, and
2 steamers,

we did not know but that some of this might be in *anticipation*; but on inquiry we found it was founded on the regular and usual appropriation for that purpose. If the usual appropriation can go on procuring timber at the above rate, there will be no necessity of any great increase of appropriation in that way.—What is to be done with the surplus Revenue?—[Washington Telegraph.]

MONUMENT TO PERRY.—We learn, with much pleasure, that the project of a monument to the lamented Perry, to be erected in this city, has not been lost sight of, and will not be abandoned. The surviving companions of that gallant spirit deem the thing due to his memory, and are determined to see it accomplished. They will not lack aid in their undertaking.—[Buffalo Journal.]

FAIR OF THE AMERICAN INSTITUTE.

This splendid display of that spirit which is constantly urging our yet infant nation still onward in the march, or rather flight of improvement, has now closed; and it is not enough for us merely to say, it has not only exceeded the most sanguine anticipation of the most enthusiastic American patriot, but it has surpassed any thing which could have been believed, had it been predicted. The official Report is in detail before the public; but we deem it not only a privilege, to which we are entitled, but a duty we owe to our readers to present them, in our own way, our own opinions, comments and remarks, if not on every article, at least on some of those we considered most particularly worthy of notice.

In estimating the respective value of the productions of human ingenuity and industry, we should place in the first rank, and at great distance before any others, those which increase the *productiveness* of human labor. He who, by his ingenuity, can contrive, in any branch of labor, in which ten thousand people are employed at one dollar per day, to produce the same effect by the labor of one thousand, or ten times the effect produced before, by the ten thousand; if he does not deserve all the increase his ingenuity has produced, he certainly deserves, and well deserves, an immense pecuniary reward, together with the grateful thanks and the cheering applauses of mankind. But it is painfully true that exactly the reverse is generally the case. The authors of far the greater number of labor-saving inventions have met no reward but poverty and contempt.

The next in order of merit is he who, by his ambition to excel, produces the fairest and most improved specimen, or the greatest quantity, of any article contributing to the comforts, or the innocent pleasures, of life. The agriculturist, who can exhibit the most improved article in his line, either animal or vegetable; or the manufacturer, who produces the most valuable sample of cloth, or any other manufactured article, ought, certainly, to be rewarded and respected accordingly; but no person of sense will contend that the man who produces the largest and fattest ox or swine, or the finest and best article of clothing, can rank, in the scale of merit, with him who has contrived means to make the same labor, in produing these articles, yield ten or a hundred-fold.

The next degree of merit, we consider, (though our judgment may by some be called in question,) belongs to the persons whose genius and refined taste serves to increase and improve the embellishments of life.

With these remarks, we shall give our notices of the various exhibitions at the Fair accordingly.

LABOR-SAVING INVENTIONS, AND IMPROVEMENTS IN MANUFACTURES.

Shaw's Patent Threshing Machine and Horse Power.—Presented by T. L. Pollard & Co., Albany. There is probably no other branch of labor which has been the subject of so many patented inventions as Threshing; and there are so many constructed on the same leading principles, that it would be impossible to tell with any certainty, which is entitled to preference, or for the patentees of a dozen or twenty, to point out how their respective Machines differ from all the rest. But it is a fortunate circumstance, that those of late invention are nearly or quite all good. Mr. Shaw's is among the number, and for aught we can see, as good as any. The Horse Power seems to present the greatest difficulty, and in this, we think Mr. Shaw's as good, and perhaps better, than any others; as it will operate with as much certainty, with as little power, and at less expense, and being less complicated, is less liable to disorder; and we are not afraid, therefore, to recommend it to any farmer.

Fitzgerald's Grinder, and Threshing Machine. — This Grinder consists of the frustrum of a cone, of French burr, which runs on a horizontal axis in a conical hollow case of the same material, which is in two halves, the one stationary and the other moveable. We saw it in operation by a single horse power, and it made flour of the first quality, and we should say half as fast as a common grist mill, with a full head of water. It must need be an excellent article where large grinding establishments cannot conveniently be come at, and for many uses where they can.

The Threshing Machine is a good one, but we shall make no comparisons in that article.

Walter Hunt's Patent Forest Saw.—We cannot better describe this article than in the inventor's own words. "A simple, effective Machine, designed for felling trees and cross-cutting their trunks for lumber; and also, for the purpose of clearing wild lands." We consider this an article of peculiar value for the following reasons: First, we are confident trees may be felled with it as fast, and we think faster than with the axe. Second, It may easily be carried and used by one man,—its weight being only 30 lbs. Third, It will cut nearer the ground than can conveniently be cut with an axe, and of course leave the stumps lower. Fourth, By felling trees with the axe, the trunks are often split near the ground, and valuable timber spoiled, which will not be the case in sawing. Fifth, Its cheapness puts it within the reach of every man engaged in lumber.

Throstle and Speeder, for Roving and Spinning Cotton. — Made at the Oldham Works, one mile from Paterson, N. J., under the direction of B. Brundred, and exhibited by Samuel G. Wheeler & Co., 42 Pine street, New-York.

These Machines exhibit some improvements in the principles of their construction; but the points which most strongly recommend them, are excellency of workmanship and materials, in both of which they are truly elegant, without superfluity; and we do not believe they can be surpassed in correctness of operation.

Washing Machine.—Invented by A. W. Soule, and *another*, by William Niffin.

We have seen many patent Washing Machines, and each declared by the inventor or vender, to be far superior to any other. We will venture to say, that the two above mentioned are both good, and probably that they are equal to any we have seen.

Improved Drill,—made by D. B. King, of Waterford. The importance of a discovery is in no direct proportion to the magnitude of the object discovered. This little diamond is worth a whole quarry of granite, though the latter is valuable; and in such proportion we consider the value of this little invention of the Drill. Every good Mechanic will feel the same pleasure, when it meets his eye, that a skillful connoisseur in the article would feel on finding a valuable diamond.

Machine for Making Staves, — invented by Philip Cornell, of New-York. As a *hand labor saving* invention, we have some doubt whether this Machine has any superior; and it does its work in a style which hand labor cannot imitate, without an immense sacrifice of time. It not only finishes, ready to put together, of any suitable timber, from 200 to 400 Staves per hour, and which need no dressing off, after they are set up, but it effects a vast saving of timber, as one Stave is taken in its finished state, directly from the side of another, without any intermediate waste.

Machine for Cutting Lath. — We can truly say of this Machine, that for operativeness, simplicity, and cheapness, it can hardly be surpassed. It cuts from 60 to 80 Lath per minute, and as they are cut off smooth at one stroke with a sharp tool, their quality is improved, and there is no waste, even of a saw-calf.

Improved Clock, — made by George Gaines, at Seneca Falls, and exhibited by E. W. Adams, the Proprietor. We had neither time nor opportunity to examine in detail the improvements in this beautiful specimen of Clock work. But we saw enough to convince us, that its plan is superior to any other now in use, as an accurate time keeper, either for private houses, or for churches and other public buildings, and we hope and trust that both the inventor and the proprietor will meet liberal encouragement from the public, which we think they certainly merit.

Improved Theodolite,—made by Ewin & Kearttе, Baltimore. Invented and exhibited by Samuel Stone. We cannot do justice to this splendid invention, as well as elegant specimen of workmanship, in the brief catalogue we are giving, so well in any other way, as to let the inventor speak for himself—we therefore give his own words.

"This Instrument embraces all the principles of a Modern Theodolite: besides which, it contains the following improvements—The first improvement is a circular revolving plate, sliding or resting upon the limb of the instrument. The upper surface of which forms a plane with the upper surface of the limb; on which are delineated a set of Mathematical numbers, which supply the place of a Table of Logarithms, and all other logarithmic tables.

"In the second place, this Instrument is so constructed as to supersede the necessity and use of a Chain in all cases. The distance of any visible object can be ascertained at one station, as far as a flag staff can be distinctly seen through the Telescope of the Instrument, to the exactness of chains, links, and decimals.

"It also calculates the Latitude and departure of every course run, and the base and perpendicular of all elevations. It further embraces all the fundamental rules of common Arithmetic, viz: Multiplication, Division, Single Rule of Three, Interest, Mensuration of Superfices and Solids, Gauging, &c. Any question in plain Trigonometry, right angled or oblique, can be solved on the Instrument correctly; including all questions that can be performed by Logarithms or Logarithmic Tables. The whole without the use of figures or a mathematical calculation."

Cheese Press, invented by S. Kibbe. This is the best plan of a Cheese Press we have ever seen.

Mowing and Grain cutting Machine, invented and exhibited by Capt. Alexander Wilson.

In estimating the value of this labor-saving Machine, it is necessary to consider the quantity and quality of the labor saved by it. It is well known that cutting down grass and the different kinds of grain, is far the hardest and most extensive, as well as expensive branch of labor in the whole catalogue of farming operations; and that it has to be performed at the critical moment when in season; and the farmer is often, thereby placed at the mercy of his hired laborers, who always charge a higher price for it than for other labor, and at times take undue advantage of the employer's necessity.

Now, if this Machine answers the intended purpose, and we can see no reason why it should not, the farmer, instead of complaining, that though the "*harvest is plenteous, the laborers are few*," can dismiss eleven of his twelve laborers; saving not only all their wages and food, but all the liquor they drink; or, if he feel a charitable disposition to employ the poor, he can by the money so saved, extend his fields to ten or twelve times their present size, and increase his stock, and consequently his wealth, accordingly. Capt. W. calculates that this Machine, with a man and horse, will do the work of twelve men in cutting either grass or grain. His plan appears to be simple and well digested; and if it should be susceptible of improvements, as he is himself a farmer, there can be no doubt that the head which has conceived the plan thus far, will be able, by the light of experience, to perfect what appears, at least to us, to be so ingeniously begun.

Machine for Sawing and Jointing Shingles, invented by David B. Moore.

We have seen several Machines for sawing and jointing shingles not very dissimilar, possibly the same. We think, however, this has some improvements; at any rate, this is a good Machine. The exhibitor states that it will make 10,000 shingles per day with a 5 horse power, which is probably the case. It would, therefore, in a place where there is plenty of timber, and a sufficient water power, be a valuable and profitable article. The cost is $100.

Double-Acting Bellows, invented by Chs. D Holmes.

This will be a valuable article, where a continuous and steady blast is wanted, either on a large or small scale. It occupies but little space, is not expensive, and cannot fail to effect *the purpose*.

Locomotive Chair, for people incapable of walking. By James Grey, Brooklyn.

This is a valuable invention for persons unfortunately deprived of the power of walking. It is a handsome mahogany chair of compact size, and the machinery by which the person moves it with either hand, is not only simplified to its lowest terms, but is truly ornamented. Mr. G. is, as far as we know, the first who constructed such a chair, and his improvements are the result of 15 years' experience.

Double-acting or Continuous Pump, for the use of houses, stables, &c. By Dudley L. Farnham.

This article is not new, though the patent has not yet expired: we have known it some years, and still know it as an excellent article.

Patent Churn. By Francis Lane.

This was the most simple looking article exhibited at the Fair; and yet we presume not only every lover of good butter, but every one who recollected as we well recollect, the many and painful hours spent in boyhood at the tedious labors of the Churn, when ever and anon, the relaxed sinews of industry received new stimulus from the cheering (not to mention fretting) admonitions of the good mother, prompting us to perseverance, and who saw this Churn, must have felt, as we felt, a peculiar glow of satisfaction as he passed it. We have seen patent churning machines tortured into every earthly shape except that of a real Churn, and adapted to all sorts of purposes but churning; but this was none of them. It was no machine at all, nothing but a couple of the real old churns of the days of our childhood, and each making the other go of itself, without the application of any power which would tire a child.

Patent Roastmeat Jack, made by Edward Shepherd, Paris, Oneida county.

This is a very ingenious and simple contrivance to turn, by clock work, a spit for roasting meat. When cooking is done on a large scale, we should consider it a very valuable article.

Improved Shears, made by David Ward.

These Shears, which were exhibited in a case with a lot of the most elegantly finished Shears we have seen, were on a plan which we should think a very great improvement, where several thickness of cloth are to be cut through at once. By a combination of levers, so light and so ingeniously contrived as to be no more unwieldy to the hand than common shears, a power is gained sufficient to cut through forty thickness of cloth without straining the hand.

Morticing Machine, invented and exhibited by George Page, of Keene, N. H.

This is one of that family of inventions which seem actually combining together to turn labor into sport, and at the same time, to increase its productiveness as if by magic. It has been exhibited in operation most of the week, morticing table legs, bedstead posts and other articles—made 16 mortices in a minute—makes them straight or circular, or oblique to any angle; will mortice a 14 spoke hub in 5 minutes, and all with more accuracy and neatness than those made by hand.

The price of the Machine, with a set of 6 chisels, is $30. He has also a machine for making mortices in framing a building, with nearly the same despatch. We should think no man, whose business embraces making mortices in wood, would be long without one.

Another *Morticing Machine*, by Richardson and Dennis, is doubtless a good article, but we did not see it in operation. But a little the most marvellous specimen of labor saving, or rather labor annihilating, we saw, was a brace of

Machines for making Biscuit, made and exhibited by J. & C. Bruce.

One of these Machines is for large and the other for small biscuit. The small one is calculated to mould in the most perfect manner, and to bake and complete at the same time 48 in a second, or 2880 in a minute, or to go a step farther into the marvellous, 162,800 in an hour. Or, to tell the whole story in few words, he will, in one hour, convert about 18 barrels of flour into good and wholesome bread. The baking part of this Apparatus was not exhibited at the Fair. We are, therefore, not authorized to vouch for the report of this part of the invention. Of the rate of moulding we had occular demonstration. The inventor assured us that his plan comprehended the baking as well as the moulding, and that he had it perfectly matured, though it was not exhibited.

To pass over all other considerations on

the Bread-Making Apparatus, we should think its importance at sea, and in war, enough to enrich, if not immortalize its inventor. A given quantity of flour takes up less room in storage than the same baked into bread. In long voyages at sea, instead of barely preserving the spark of vitality, by gnawing upon a dry and mouldy substance, which, perhaps, was once bread, but is now the habitation of myriads of noisome insects, the health of a crew will no doubt be promoted, independently of the comfort, by good and wholesome bread every day, or at farthest once a week; and the same benefits will result to an army on land.

The whole expense of this wonderful Apparatus, sufficient for a ship of the line, will not exceed $100, and the space it will occupy is so small as to be of no consequence. Who can tell why this does not meet with encouragement?

Arnold's Patent Machine for Making Twisted Roving.—The several inventions for making Rubbed Roving, and the preference given to that kind of Roving, except for fine twist, have nearly superceded the use of Twisted Roving altogether in this country. But in spinning cotton from 60 hanks to the pound upwards, Roving is doubtless to be preferred with some twist; and as we are constantly progressing towards finer fabrics, we think this speeder may become a valuable article. Such is the opinion we formed, in the absence of any one to explain it.

Hamilton's Machine for Sawing down Trees.—This article stood in the Fair by the side of, and of course in competition with, that of Hunt, and we noticed the preference alternately given to each, by the multitude who examined them. But these opinions weighed nothing with us. We assume the right to judge for ourselves. There were some strong points, respectively, in favor of each. Cheapness and portableness were in favor of Mr. Hunt's Machine. The effect of the fly wheel, to equalize the resistance to the power applied, was in favor of Mr. Hamilton's. The former is the application by hand, aided by a lever, and spring of the saw, directly to the tree. In the latter the saw hangs upon a frame, swinging upon a pivot, operated upon by a crank and fly-wheel, and pressed forward to its work by a weight. We shall appeal to the decision of time and experience, for a decision as to their relative value.

Blowing Machine.—This is an ingenious contrivance, by Mr. Brundred, of the Oldham Works, near Paterson. It consists o the frustrum of a cone surrounded with spiral fans, which being inclosed in a conical shaped case, the air is converged and forced out at the small end with any force, according to the propelling power. It will prove a useful thing.

Model of a Spiral Reacting, or Tub Water Wheel. This is one of a numerous family of Water Wheels, varying but little from each other, and which we think is as good as any we have seen of the kind. They are importantly useful in certain situations.

Improved Stoves.—This is a very important subject, and worthy to engage, as it has engaged, the most eager emulation. But the competitors are so numerous, and so many important improvements have been exhibited, that it would be difficult if not impossible to award the victory with justice to any one. At this Fair there were 80 different stoves exhibited. The preference in this department of invention has been generally given, and we believe justly, to Dr. Nott. But it seems impossible for one man to run so fast in any race but that another may equal him. We had not an opportunity to examine critically the merits of each stove, but we think the claims of Mr. James Wilson, of Mr. Parmalee, and of Mr. Parker, entitle them to a candid examination.

Bee Hives.—Among the numerous useful improvements, we saw none more entitled to patronage than the bee hives, exhibited by Messrs. Parish and Kelsey. Both their plans were good. We were instructed and amused by the practical knowledge of Mr. Kelsey on the subject, a degree of knowledge which few men would have patience to acquire; we intend to profit by Mr. K's instructions, but we prefer the hive exhibited by Mr. Parish. We hope the labor and examples set by these gentlemen, will put an end to the shameful pratice of destroying these industrious little creatures with fire and brimstone.

Printing Press.—The hand Printing Press of M. L. Kingsley, embraces some improvements in simplicity and facility of working; and notwithstanding the overwhelming importance of the double or single Napier Press, we think this still has its usefulness, and is entitled to respectful notice.

MANUFACTURES.

As it is proper to commence with the most valuable articles, we will select *Mr. Pemberton's Improvement in Gold.* Mr. P. has succeeded in effecting a perfect and solid union between pure gold and pure copper, and between 18 carat gold and a composition very suitable for various purposes, in so perfect a manner that a bar plated and drawn down will answer an infinite number of purposes, in all respects as well as solid gold. The Buttons exhibited by Mr. P. manufactured in this way, are in all respects, for use and beauty, superior to buttons of real gold, as the metal on which they are plated is more substantial, and all that can be seen is gold. The same, when plated on both sides, may be said of the Watch Cases—and we might add, many other articles.

Silver Ware.—The specimens of Silver Ware exhibited by Mr. Marquand, 181 Broadway, and Mr. James Thompson, 129 William-st., produced the most agreeable astonishment, especially to us, who well remember when to produce a common Silver Buckle in this country, was a thing viewed with utter astonishment.

Articles of Copper.—We saw several elegant aritcles of Copper, which we thought quite as worthy of attention, and as useful as those of gold or silver, though the material did not cost so much.

We will next notice some articles chiefly of Steel and Iron, which we consider to be of still more intrinsic value than those made of any other metal.

We will begin with the beautiful specimens of *Edge Tools*—consisting of Chissels, Gouges, Drawing Knives, Broad Axes, &c. &c. Superior in finish to any imported ones we have seen, and we trust no less so in temper, as they were manufactured by Kennedy & Way, of Hartford—in the senior member of which firm we recognize an old friend, whose ingenuity, in that line, as well as honesty and patriotism, we have witnessed in days of "*Lang Syne.*"

The *Wood Screws*, by Messrs. J. G. Pierson and Brothers, are far superior to any imported articles of the kind we have seen.

The Case of elegantly finished *Shears*, of somewhat varied descriptions, but above all the pair with increased power which we have already described, are elegant indeed.

Another valuable item was *Hinges*, of various descriptions—a most superb article.

Door Locks—and various other articles composed of metal, all of which were superior to any thing of a similar nature which we have been accustomed to meet with.

Watch Dials, of rich and superior beauty, by Mr. Mullen, 175 Broadway.

Sheet Brass, manufactured at Waterbury, Connecticut—a very important article, and of excellent quality.

Sheet Zink, in very large sheets.

Razors, Penknives, Shears, and other Cutlery, in as high perfection as ever graced a show-case, by Robert Ward, 142 Fulton-st.

Another sample, of similar character, by William Wild, 142 Fulton and 162 Division street.

Augers, and various instruments for boring, of the most improved form, and exquisite workmanship.

A splendid lot of Joiner's and Cabinet Maker's Tools, such as an ambitious young man might feel proud to work with, and such as twenty years ago were never seen on this side of the Atlantic, and perhaps rarely on the other, by A. & E. Baldwin 404 Broome street.

Scales and Scale-beams, of the most approved forms and finished workmanship, by D. H. & S. Nichols.

In the line of *Clothing*, we can only say collectively—there was a universal assortment composed of every material, except *Silks*, which we have every reason to believe will form a brilliant climax to the display another year. The exhibition of *Broadcloth, Cassimers, and other Woollen Goods*, left apparently but little room for future improvement. One piece of *Black*

Cloth in particular, without any disparagement, to the rest, was for excellency of finish, and particularly for its silky softness, a proud article for our country, or any other. It was made by C. A. Beecher, Waterbury, Connecticutt.

In *Cotton Goods*, the display was highly respectable, consisting not only of almost every article of undyed Cotton in use, but of dyed and printed Goods, of exquisite beauty. The printed Muslins and dress, and furniture Calico, from W. Robertson, of Fall River, did credit to the Manufacturer, and to the country.

The *Cut Glass*, from W. T. Morton, of Baltimore, was as near perfection as our fancy can reach.

The specimens of *Bookbinding and Blank Ruling*, were beautitul indeed—if they can be surpassed it would be needless.

The various articles of *Cabinet Furniture*, some displaying superior workmanship—some[illegible] improved form, and ingenious contrivances for convenience, and some both, were well worth their price, to those who can afford to buy them, and a gratifying treat to us who could not.

With respect to the *Piano Fortes*, and other stringed as well as wind Instruments, we can only say, in general terms—they were a superb display, but we were not surprised nor astonished, for we expected to find them so. It is to be feared they have left no room for improvement another year.

We must not forget, as a specimen of American manufacture, a *Bolt of Duck*, a most substantial and well finished article, by our valued friends Amos Briggs & Co. Scaghticoke.

Various articles of *Indian Rubber* were exhibited, which were not only valuable in themselves, but much more peculiarly so, as they pointed to an immense, but yet unexplored field of future improvements, of which that article is to form the foundation. The little net-covered globes, or parlor balls, exhibited by H. Percival & Co. must certainly furnish an all-important hint to the Æronaut. But at any rate, we have no fear in predicting that the hundredth part of the uses of this long neglected article have not yet been thought of.

The specimens of *Crown Window Glass*, from Redford, and from Brooklyn, certainly bid defiance to any other country in that line. As they stood in a bad light, we could not decide which was entitled to the preference, if either; but either of them far surpassed any imported Crown Glass we ever saw.

There were some beautiful specimens of *Swords*, but as we profess to belong to the *peace party*, we hope they will never come into general use.

Relief Bed for the Use of the Sick.—Among the numerous and successful displays of inventive genius, we saw nothing which merited more grateful applause, or a more liberal reward, than the above article, invented by Mr. Jones, of Providence, R. I.

Mr. J. states that he has been employed a great number of years in attending on the sick, and that the plan he has presented has been suggested by necessity, and improved and directed by his long experience, and it may be truly said his services confirm his statement, and do credit to his genius.

By this wonderful contrivance, whilst a sick person may be lying horizontally and asleep on it, the upper part of the bed may be elevated to any angle required, and, if necessary, lowered again to the same position—or the patient may be raised from the bed altogether, and swung off by a crane, at the head of the bed, while the bed is made, and then put back on a fresh made bed, and all this without sufficient jar to awaken the patient from the most delicate and watchful sleep.

Whenever the state of the patient requires, or admits of sitting in a chair, the bed may be immediately transported into an easy chair, and back again in a moment, when required, to a bed, in so gentle a manner as not to give pain even to a broken limb. Should the patient be delirious, even to the most raving maniac, this same soft bed is in an instant made to supercede the use of the straight jacket, by confining the body, head, and even the limbs, in the most perfect stillness, and without the slightest pain; and in addition to all these conveniences, the necessary calls of nature may all be attended to with the most perfect cleanliness, and without the slightest movement of the patient.

Who would not be willing to reward so much ingenuity applied to such a purpose?

We have now enumerated, with occasional remarks, those articles which we thought most important; especially the most useful. To go into an entire detailed description of the several hundreds of fancy and minor articles, though many of them were useful, and all perhaps displayed ingenuity, and a spirit of enterprise which deserves encouragement, yet we think it would occupy too great a portion of our pages, which our readers would decide might be appropriated to better use.

We shall notice, when we have leisure, and room in our pages, some of the foregoing articles, more at length, and give engravings in cases where we can obtain them.

[*From the Albany Argus of Saturday.*]

COMMON SCHOOLS.—According to the notices that had been given, a large and intelligent audience assembled on Thursday evening, in the Female Academy, when the meeting was called to order by Gideon Hawley, Esq. who moved that his Excellency, Wm. L. Marcy, be chairman of the meeting. The motion was unanimously adopted. Mr. Hawley then proposed that Thos. W. Olcott be the secretary of the meeting.

The Governor then rose, and after introducing Mr. Taylor to the audience, made some pertinent remarks on the importance of the great subject before the meeting. He stated that he was highly pleased to hear of the benevolent efforts of some of our truly patriotic citizens who had sustained this mission among our common schools, and that he was gratified with the privilege of now hearing some of the results of Mr. Taylor's tour.

Mr. Taylor then addressed the audience for more than hour, in a practical style, manner and thought, which made a deep impression upon the audience, and which showed that the speaker was fully acquainted with his subject. The friends of education felt that great good to our common schools would arise from Mr. T.'s investigations. It is understood that the facts and results stated in the lecture will be published in a report, hereafter to be made to the patrons of the mission, and we shall therefore omit giving the purport of the lecture.

Census of New York.

The following is a correct estimate of the present inhabitants of this city—being an abstract of the Census recently taken:—

WARDS.	Number of male persons in each ward.	Number of females in each ward.	No. of male persons subject to military duty.	No. of persons entitled to vote at elections.	No. of male persons who are not naturalized.	Number of paupers in each ward.	No. of colored persons who are not taxed.	No. of colored persons who are taxable.	Color'd persons taxed and entitled to vote.	No. of married females under the age of 45	No. unmarried females between 16 and 45.	No. of females under the age of 16 years.	No. marriages where female lived in the ward.	Number of births in each ward during the year. MALE.	Number of births in each ward during the year. FEMALE.	Number of deaths in each ward during the year. MALE.	Number of deaths in each ward during the year. FEMALE.	No. of acres of improved land in each ward.
1st	5538	4704	1549	2195	1264	1	581	14	1	1335	1559	1372	52	198	117	77	78	130 91
2d	4365	3175	586	1474	787	1	295	1	1	754	1198	874	27	65	63	48	14	73 82
3d	5462	5482	1994	2211	1067	8	599	1	2	1161	2354	1504	112	131	113	103	74	85 92
4th	8663	6757	2965	3150	2413	1	180	19	19	2237	2005	2143	100	234	221	167	121	76 53
5th	8401	10069	879	2602	2579	43	1978	1	3	2628	3004	3174	172	331	308	250	194	127 41
6th	8849	8588	1761	2308	1926	111	1797	3	5	2535	2574	2368	37	264	246	104	53	91 59
7th	10081	11401	1720	3511	2232	1	813			3208	3064	3067	200	452	442	274	211	221 86
8th	12979	15581	2354	4144	1669		2773			4438	4284	5304	197	478	456	272	264	157 82
9th	9901	10665	860	3119	1334		296			3455	1990	4333	162	272	323	286	207	264 80
10th	10046	10890	1619	3678	1946	2	990	10		3104	2916	3658	233	418	406	267	231	98 97
11th	12865	13980	2589	4137	2877	6	803	2	4	4845	2276	5666	174	582	617	338	242	433 89
12th	13128	11300	861	3387	3689	1684	1237	19	19	3916	1909	3940	101	318	257	451	416	2302 00
13th	8071	9054	1689	3606	1971		694	3	2	2715	1975	3406	178	279	284	288	208	98 75
14th	8130	9175	1327	2444	1469		983	6	5	2341	1964	2793	208	364	394	230	174	96 42
15th	5583	7531	827	1970	1065	36	989		11	1955	2744	2362	38	217	178	117	140	216 94
Total	131,522	136,351	22,910	42,936	27,538	1,893	14,945	79	75	39,927	35,716	46,464	1,991	4,596	4,425	3,273	2,657	4,476 45

There are in the city and county of New-York

175 deaf and dumb; of blind 105; of idiots 32; of lunatics 176.

Males, - - - -	131,522
Females, - - - -	138,351
Total, - - - -	269,872

COMPARATIVE STATEMENT,

	1835.	1830.	Increase.
First Ward,	10,242	11,331	
Second Ward,	7,540	8,203	
Third Ward,	10,884	9,599	1,285
Fourth Ward,	15,420	12,705	2,715
Fifth Ward,	18,490	17,722	768
Sixth Ward,	16,837	13,570	3,267
Seventh Ward,	21,482	15,873	5,60
Eighth Ward,	28,560	20,729	7,831
Ninth Ward,	20,566	22,810	
Tenth Ward,	20,936	16,438	4,498
Eleventh Ward,	26,845	14,915	11,930
Twelfth Ward,	24,437	11,308	13,129
Thirteeth Ward,	17,025	12,598	4,427
Fourteenth Ward,	17,305	14,288	3,017
Fifteenth Ward,	12,904		
Total—1835,	269,873	202,589	12,904
1834,	202,589		
Increase	67,281		
Increase in the Wards, as above			71,280
Decrease.			
First Ward,	1,089		
Second Ward,	663		
Ninth Ward,	2,244		
			3,996
			67,284

The Fifteenth is a new Ward, taken from the Ninth, which accounts for the decrease in the latter.

The total increase in the last five years, is a fraction more than *thirty-three per cent.*

Number of neat cattle in the city and county of New York, 4062; number of horses, 10,712; number of sheep, 416; number of hogs 11,879;—number of yards of linen, cotton, or other thin cloths, manufactured in the domestic way during the year preceding, 668,000—the whole of these manufactures being in the Twelth Ward. Number of cotton factories 5; all in the Ninth Ward.—The value of the raw materials used and manufactured in these factories is $202,800—the value of the manufactured articles $271,600—the number of yards of cotton cloth 672,000. There is one woollen factory in the Tenth Ward, using and manufacturing $15,000 worth of raw materials, the value of the manufactured articles being $23,000. There are 11 iron works—1 in the Second ward, 3 in the Sixth ward, 4 in the Tenth ward, and 3 in the Fourteenth ward. The value of raw materials used and manufactured in them is $130,250—the value of manufactured articles is $348,050. There is 1 trip hammer in the Tenth ward; value of the raw material manufactured $17,000; value of the manufactured articles $21,000. There are 9 distilleries—value of raw materials $532,527; value of manufactured articles $659,067. Two grist mills; value of raw materials used $108,000; value of manufactured articles $130,000. Five saw mills; value of raw materials $311,860; value of manufactured articles $417,210. Paper mill—1 in the Seventh ward; value of raw materials $8000; value of manufactured articles $10,000. Tanneries —5 in the Fourth ward, 2 in the Seventh ward, 1 in the Eighth ward, and 1 in the Thirteenth ward; value of raw materials $23,855; value of manufactured articles $55,260. Breweries 10—in the Fourth ward 2, Fifth ward 2, Seventh ward 1, Eight ward 1, Ninth ward 1, Tenth ward 1, Thirteen ward 1, Fifteenth ward 1; value of raw materials $152,475; value of manufactured articles $226,505.

Messrs. Davis and Miller, the agents despatched to England in the Pilot boat Aymar, in pursuit of Bowen, the smuggler, returned on Monday in the Liverpool packet, having failed in accomplishing the object of their voyage. On their arrival at Liverpool, we understand they applied to the magistracy for a warrant to arrest the fugitive, but could not obtain one. At the suggestion of Mr. Ogden, the American Consul, application was next made to Lord Palmerston, secretary for foreign affairs, but without success. In reply, his lordship stated that, as no compact existed between Great Britain and the United States, authorizing the surrender of fugitives from justice, the redress sought for in this instance could not be granted.—[Courier and Enquirer.]

ORDER No. 80. HEAD QUARTERS OF THE ARMY, *Adjutant General's Office*, WASHINGTON, Oct. 31, 1835.

1....PROMOTIONS and APPOINTMENTS in the Army since the publication of "*Order*" No. 38, of July 1st, 1835.

1—PROMOTIONS.

Regiment of Dragoons.

Second Lieutenant John S. Van Derveer, to be First Lieutenant, 15th August, 1835, vice Hamilton, cashiered.

Brevet Second Lieutenant Henry Turner, to be Second Lieutenant, 15th August, 1835, vice Van Derveer, promoted, (brevet 1st July, 1834.)

First Regiment Artillery.

First Lieutenant Lemuel Gates, to be Captain, 1st October, 1835, vice Henry Whiting, resigned.

Second Lieutenant Miner Knowlton, to be First Lieutenant, 23d July, 1835, vice Palmer deceased.

Second Lieutenant John F. Kennedy, to be First Lieutenant, 1st October, 1835, vice Gates, promoted.

Brevet Second Lieutenant John F. Lee, to be Second Lieutenant, 23d July, 1835, vice Knowlton, promoted, (brevet 1st July, 1834.)

Brevet Second Lieutenant Charles B. Chalmers, to be Second Lieutenant, 31st August, 1835, vice Harris, resigned, (brevet 1st July, 1834.)

Brevet Second Lieutenant Louis A. B. Walbach, to be Second Lieutenant, 1st October, 1835, vice Kennedy, promoted, (brevet 1st July, 1834.)

Second Regiment of Artillery.

Brevet Second Lieutenant Charles J. Whiting, to be Second Lieutenant, 10th September, 1835, vice Prentiss, resigned, (brevet 1st July, 1835.)

Brevet Second Lieutenant George M. Legate, to be Second Lieutenant, 31st October, 1835, vice Vance, resigned, (brevet 1st July, 1835.)

Third Regiment of Artillery.

Brevet Second Lieutenant Robert R. Mudge, to be Second Lieutenant, 31st August, 1835, vice Bryant, resigned, (brevet 1st July, 1833.)

Fourth Regiment of Artillery.

Brevet Second Lieutenant Alexander E. Shiras, to be Second Lieutenant, 6th October, 1835, vice Petigru, deceased, (brevet 1st July, 1833.)

Third Regiment of Infantry.

First Lieutenant Otis Wheeler, to be Captain, 31st October, 1835, vice Loring, resigned.

Second Lieutenant Nathaniel C. Macrae, to be First Lieutenant, 31st October, 1835, vice Wheeler, promoted.

Brevet Second Lieutenant George P. Field, to be Second Lieutenant, 25th July, 1835, vice Baldwin, deceased, (brevet 1st July, 1834.)

Brevet Second Lieutenant Cary H. Fry, to be Second Lieutenant, 31t August, 1835, vice Legate, resigned, (brevet 1st July, 1834.)

Brevet Second Lieutenant Thomas O. Barnwell, to be Second Lieutenant, 31st October, 1835, vice Macrae, promoted, (brevet 1st July, 1834.)

Fourth Regiment of Infantry.

Brevet Second Lieutenant Benjamin Alvord, to be Second Lieutenant, 21st July, 1835, vice Manning, deceased, (brevet 1st July, 1833.

Fifth Regiment of Infantry.

Brevet Second Lieutenant Thomas Stockton, to be Second Lieutenant, 31st August, 1835, vice Scott, resigned, (brevet 1st July, 1831.)

II. APPOINTMENTS.

Staff.

Brevet Major Henry Whiting, Captain in the First regiment of Artillery, to be Quartermaster, 23d September, 1835.

Charles M. Hitchcock, to be Assistant Surgeon, 17th August, 1835.

William W. Hoxton, to be Assistant Surgeon, 24th August, 1835.

Regiment of Dragoons.

Cadet Abram R. Johnston, to be Brevet Second Lieutenant, 1st July, 1835, to take rank next below Brevet Second Lieutenant Hanly.

Third Regiment of Infantry.

Cadet Hugh McLeod, to be Brevet Second Lieutenant, 18th September, 1835.

Fourth Regiment of Infantry.

Cadet Henry Prince, to be Brevet Second Lieutenant, 18th September, 1835.

III.—CASUALTIES.

Resignations.

Captains.

Henry Whiting, 1st Artillery, 1st October, 1835.

Henry H. Loring, 3d Infantry, 31st October, 1835.

Second Lieutenants.

David B. Harris, 1st Artillery, 31st August, 1835.

Henry E. Prentiss, 2d Artillery, 10th September, 1835.

Joseph C. Vance, 2d Artillery, 31st October, 1835.

William Bryant 3d Artillery, 21st August, 1835.

Stephen B. Legate, 3d Infantry, 31st August, 1835.

Moses Scott, 5th Infantry, 31st August, 1835.

Brevet Second Lieutenants.

James N. Ellis, 1st Artillery, 19th October, 1835.

Montgomery Blair, 2d Artillery, 10th October, 1835.

Herman Houpt, 3d Infantry, 30th September, 1835.

Lucius Bradbury, 7th Infantry, 1st October, 1835.

Deaths.

Brevet Lieutenant Colonel William Linnad, Quartermaster, 20th September, 1835.

First Lieutenant William Palmer, 1st Artillery 23d July, 1835.

Second Lieutenant Charles Petigru, 4th Artillery, 6th October, 1835.

Second Lieutenant Alexander G. Baldwin, 3d Infantry, 25th July July, 1835.

Second Lieutenant David A. Manning, 4th Infantry, 21st July, 1835.

Assistant Surgeon Foster Swift, 18th August, 1835.

Assistant Surgeon Robert French, 13th August, 1835.

Revoked.

Charles Little, Military Storekeeper, 31st August, 1835.

Cashiered.

First Lieutenant James W. Hamilton, Dragoons, 15th August, 1835.

2.—The Officers *promoted* and *appointed*, will report accordingly, and join their proper stations, and companies, without delay; those on detached service, or acting under special orders and instructions, will report by *letter* to their respective Colonels.

IV.—"RULE TO BE OBSERVED IN ORDINARY CASES OF PROMOTION."

3.—"If a field officer, the officer *promoted* will join the regiment and station of his predecessor; if a company officer, he will join the particular company where the vacancy to which he succeeds may have occurred."

By order of ALEXANDER MACOMB, Major General, Commanding in Chief.
R. JONES, Adj't. General.

TRANSFERS.

Brevet Second Lieutenant James H. Stokes, of the 2d Regiment of Artillery, transferred to the 4th Artillery.

Brevet Second Lieutenant William H. Betts, of the 7th Regiment of Infantry, transferred to the 1st Regiment of Artillery.

The following gentlemen were admitted at the present term of the Supreme Court, as Attorneys and Counsellors:

Attorneys.—George K. Andrews, Walter W. Allen, Horatio P. Allen, Augustus L. Allen, Chas. H. Bramhall, John M. Bradford, Daniel A. Baldwin, George Buckham, John E. Brackett, Horatio Bogert, Lorenzo D. Brock, Howard Chipp, Solomon B. Conely, Stephen B. Cushing, Phedrus Carter, William Calkins, Ebenezer Clark, Sullevan Caverno, Alexander Fonda, Joseph Genter, Daniel Gray, Thomas Graham, Milton N. Halsey, John Howes, Augustus S. Hills, Abraham Hoes, Joseph D. Jordan, John James Kane, William H. Leonard, Edwin C. Litchfield, John L. Lewis, jr., Daniel T. Mosely, Henry B. McClure, George W. Newell, Franklin J. Osborn, Robert O. Reynolds, Hiram Riggs, Henry J. Ruggles, Charles A. Sherman, Walter W. Seymour, Allen M. Sherman, Charles Stuart, Charles W. Swift, Erasmus P. Smith, Wessel S. Smith, Gilbert M. Spier, Marshall M. Strong, Alexander B. Thompson, Charlemagne Tower, Peter A. Van Bergen, Isaac V. Van Der Poel, Don Carlos Woodcock, Abel B. Watkins, jr., Arthur C. Southwick, John Wait, Henry P. Wanmaker, Henry Whitney.

Counsellors.—Henry G. Colton, Joseph Crapoo, John L. Curtenius, J. L. Endress, Amos Gould, Joseph D. Husbands, Charles M. Jenkins, Alex-

ander Hursheedt, Robert H. Martin, Nathan Wescott.—[Albany Eve. Jour.]

TEA IN INDIA.—A Calcutta paper gives the following account of the discovery of the Tea plant in India, from which it appers possible that it may become an article of trade from that country.—[Boston Adv.]

TEA PLANT.—We understand that further discoveries of the Tea plant have been made on our eastern frontier among the Muneepoor hills, and that some specimens of the leaves have been sent down to the Agricultural and Horticultural Society, and are now in possession of Dr. Wallick.—Major Grant has the merit of this new discovery. The plant was pointed out to him in the hills by Shans, who knew it well, having visited the tea garden cultivated by the Chinese. But we are told, the specimens of the leaf, (which we have not seen,) from want of a proper curing, are not in a state to render it possible at present to judge of the quality of the tea that might be obtained in that district. In the meantime it is very satisfactory to know that the plant is common among those hills in a large extent of country, and that we have thus a double resource in our own neighborhood, which may hereafter render us independent of China for a commodity become so necessary to the comfort of Europeans, and so very important as an object of trade. The hills in Muneepoor, on which the tea plant is indigenous, must be of considerable elevation, for in a letter we have seen describing the successful result of a late harassing expedition against some freebooters, it is mentioned that, in two days' march from Sangonoo, the party found themselves among pine and oak forests, and that the nights, even in the middle of March, were extremely cold.

LATER FROM EUROPE.—By the packet ship *Virginian*, Harris, master, from Liverpool, we have our London papers to the 7th ultimo, inclusive—from which we make such extracts as appear of interest, though, at present, there is not much of certain intelligence respecting Spain, the chief point of attention.

The following article from the London Times of 7th October, presents a brief summary of the latest intelligence from the Continent:—[N. Y. American.]

The Paris papers of Monday, 5th October, received, with a number of private communications, by express, bring no further intelligence from the interior of the Peninsula, and as the resignation of M. Mendizabal on the 25th of September, rested exclusively on the authority of the *Memorial Bordelais*, the absence of direct intelligence from Madrid, joined to the continued silence of the telegraph on the subject, might have given to the statement a sufficient contradiction. Even the *Journal des Debats* had begun to express some reluctant doubt on the subject, and the *Moniteur du Commerce*, a Ministerial print of the same political complexion with the *Memorial Bordelais*, is the only paper published in Paris on Monday, which still professes to believe in M. Mendizabal's resignation. Starting from that point, it is pretended that a commercial crisis, the result of political anarchy, had already arisen in Catalonia. Commercial orders having been in a great measure suspended, a number of manufacturers had been obliged to dismiss the most of their workmen, and upwards of twenty manufacturing establishments at Barcelona had been entirely closed, while others had announced their intention of winding up their affairs for the purpose of escaping from utter ruin. The cotton trade has suffered more severely than any other, having attained to a high degree of prosperity under the system of absolute prohibition against the importation of cotton goods, which has heretofore prevailed in the Peninsula. The number of workmen employed in this branch alone is stated at 100,000; the annual amount of their wages at 150,000,000 reals, the amount of fixed capital expended in buildings and machinery at 180,000,000 reals; and the annual value of the produce at 325,000,000 reals. A fourth part of this trade is said to be concentrated in the city of Barcelona; and this Ministerial journal, the *Moniteur du Commerce*, is at great pains to impress on the minds of the 100,000 workmen of Catalonia, that the distress to which they are exposed, arises from the undue advantage which England has taken of the confusion which prevails in the country, by throwing into Spain immense quantities of British manufactures, at a moment when it was impossible for the custom-house officers to watch over illicit transactions with their customary care.

From the returns of the French custom houses, also, there appears to have been a considerable deficit on the first three quarters of 1835, as compared with the corresponding period of former years. At Havre alone the diminution amounts to 3,644,000 francs, as compared with the receipts for the three first quarters of 1834; and at Marseilles, although the returns for September have not yet been made up, it is known that a considerable deficit arises in the receipts for the first eight months of the year. This state of things, however, is not ascribed to the influence of England, but to the non-arrival of the usual supplies of colonial sugar, arising, it is said, from a belief that the privileges enjoyed by the French colonies, make raw sugar dearer in France than in any other country.

The *Venetian Gazette* of the 22d of September announces the arrival there three days before, of Don Miguel of Portugal, who had come from Rome, travelling under the name of the Count de Ramalhao, and the *Precursor*, a Portuguese journal published in Italy, contains a proclamation, bearing the signature of Don Miguel, and dated from Rome, before his departure for Germany, in which His Highness protests against the sale of ecclesiastical property in Portugal, and against all the sacrilegious violence and usurpation in which the present Government has indulged on the subject. He promises to do all that his religion, his honor, and his love for the Portuguese people can require of him, to frustrate their designs, and when he re-appears in Portugal to reascend the throne which belongs to him, he declares that he will not recognize these sales, but that he will be inexorable in causing the purchasers, whether natives or foreigners, to lose the capital they may have expended.—Neither law nor justice, he says, can give validity to such sales, nor impugn the protest he makes against them.

Our Bayonne correspondent, who writes on the 1st inst., throws discredit on a report which prevailed there of Don Carlos having clandestinely quitted his army. No authentic intelligence had been received from the seat of war since the despatches of General Evans and Colonel Wylde, of the 22d ult., and no credit was given to the account of actions said to have taken place near Orosco, 6 leagues from Bilboa, on the 20th ult.

Our letter from Barcelona of the 23th states that despatches had been received from General Pastors, giving an unfavorable account of his operations. The greater part of a strong detachment of the line belonging to his division had been cut to pieces near Castellbo, by the Carlists.

[*From the Journal du Commerce.*]

They write from Philadelphia, under date of Sept. 7th, as follows: "Nothing new relative to the state of affairs between France and the United States. The President maintains a profound reserve. None of the ministers hazard an opinion, either that the money due by France, will, or will not, be paid. During the last absence of General Jackson from Washington, a person in conversation with him, having alluded to this question, the President said but few words, and those far from satisfactory. He expressed himself thus: "I will never say yes or no to the French government, to ensure the payment of the money stipulated in the Treaty."

The London money market has become much easier.

LONDON, Oct. 6th.—The extinction of the monopoly of the East India Company, and the great increase in the exports of cotton and woollen manufactures to India, China, the Pacific, and the U. States, is rapidly attracting capital from private sources to supply the place of that establishment, and to carry on those important branches of commerce with enterprise and vigor. A mercantile association upon a very extensive scale has been formed for this purpose in the city, and is to commence, it is understood, on the 1st of January. One gentleman, a member of this firm, has, it is stated, proceeded to the United States to arrange a system of banking and mercantile operations with that country, and to form connecting links with the Pacific, Calcutta, and Canton, where establishments have already been appointed to act in concert with the London firm.

The transactions to-day in the English Stock market were unimportant, and the price of Consols remained almost stationary at 90 7-8 for the account, and 90 3-4 for money. Omnium closed at 3 3-4, and Exchequer bills at 15s to 17s premium.

PARIS, BOURSE, Oct. 5, quarter to 4 P. M.—The Rentes have remained steady to-day, between 81f. 70c. and 81f. 75c. The Spanish stocks were looking down at the earlier part of the Bourse, on the report that M. Mendizabal had resigned; this, however, appears to be untrue, and, on the contrary, some good news having arrived from Spain, the securities have considerably improved.

It is reported that Louis Philippe is inclined to set at liberty Prince Polignac and his fellow-prisoners in Ham Castle. This is said to have been promised to M. Sauzet (who is named as likely also to get a seat in the Cabinet) for his so promptly undertaking to draw up the report on the Press Bill.

From the returns of the French custom houses, there appears to have been a considerable deficit on the first three quarters of 1835, as compared with the corresponding period of former years. At Havre alone the diminution amounts to 3,644,000 francs, as compared with the receipts for the three first quarters of 1834; and at Marseilles, although the returns for September have not yet been made up, it is known that a considerable deficit arises in the receipts for the first eight months of the year.

The *Messager* contains the following:—"There has been a rupture among the members of the Cabinet, which is no secret to the confidents of Ministers. According to accounts we have received, the King is very much dissatisfied, and has taken several of these gentlemen at their words, on their telling him that affairs of State would not permit them to go to Fontainebleau, and consequently M. Persil will alone go there. It is added that expresses have been sent to M. Dupin, Marshal Soult, and M. Sauzet, but these personages are less likely to ally themselves with M. Persil, than with the Doctrinaires. The only alternative will be therefore to make a complete clearance, but this probably will not be done, and therefore the whole will end in a new accommodation."

PARIS, Sept. 30.—A telegraphic despatch from Calais, dated to-day, announces that the King and Queen of the Belgians have arrived here last evening, and that they embarked to-day, at 2 o'clock, for Ramsgate.

LONDON, Oct. 5.—In the churches of the metropolis yesterday, and in the chapels of the Dissenters, the "Reformation" and its chiefest and most glorious concomitant, the publication of the Holy Scriptures in the English language, were most fitly and most zealously commemorated. We are sure that as speedily as the announcements can be forwarded, we shall have to tell that the pastors, as well of the establishment as of separated congregations of Protestants, in the country, directed the attention of their hearers principally, if not exclusively, to those inestimable works—glorifying God that he was graciously pleased to put it into the hearts of their ancestors to attempt the structure of monuments of such imperishable fame, and praying that they may prove themselves worthy of the great and good men from whom they are descended, and honestly fulfil their first duty to posterity by preserving perfect, and intact, wherever the dominion of Britain extends, the fate which so many martyrs joyfully sealed with their blood.

The *Venetian Gazette* of the 22d of September announces the arrival there three days before of Don Miguel of Portugal, who had come from Rome, travelling under the name of the Count de Ramalhao.

LISBON, Sept. 26, 11 o'clock, P. M.—The obsequies celebrated on the 24th for the repose of the soul of the late Don Pedro, at the church of San Vicense de Afora, were attended by both Her Most Faithful and Her Imperial Majesties, all the Peers and other nobility, Deputies in Lisbon, the Foreign Ministers, Lord Howard de Walden, having come on purpose from Cintra; Generals, Admirals, and officers; the Council of State, the Ministers of the Crown, and by the most respectable people in town.

A slave trader has lately arrived in the Tagus, consigned to Mr. S——, a German. She returns, after having sold her slaves at Rio Janeiro and the Havana, with a net profit of 95,000 crowns, or 10,000*l*., after deducting every outlay, and she will soon start again on another creditable and humane expedition of this kind. There are three French residents here concerned with Mr. S—— in the nefarious and infamous expedition, and, unless, our

government adopt some other course, the traffic from hence will increase.

SPAIN.

PARIS, Oct. 1.—It is said on Change that letters of the 25th from Madrid, are received, stating that the Marquis de Las Navas has placed himself at the head of the volunteers of Andalusia, and that the garrison of Madrid has departed for the army of the North. If this is true, it would seem to imply that the Constitution of 1812 had been proclaimed at Madrid.

A telegraphic despatch dated Bayonne, Oct. 29th, announces the following nominations in the Gazette de Madrid:

"Mina is appointed Captain General of Catalonia; Palafox, Captain General of Arragon; Aspinosa, of Andalusia; and Quiroga, of New Granada."

A telegraphic despatch, dated Perpignan, September 28th, announces that on the 24th General Averve beat 4000 Carlists near d'Olot. Their loss is estimated at 2000 men.

The Junto of Barcelona has declared that it will retain its power until a Captain General arrives who possesses their confidence.

A recent engagement is spoken of as having taken place between Bilboa and Vittoria, in which the Queen's party revenged itself completely. A Carlist division which attempted to oppose the march of Gen. Espeleta, suffered much loss, having been pressed on the one part by that General, and on the other by Gen. Cordova.

LONDON, Oct. 7.—Despatches dated the 28th ult., in the highest degree satisfactory to the friends of Spain and of the Government of her Catholic Majesty, were received from Madrid on Monday afternoon, at the hotel of the Spanish Embassy in Paris. The Conde de Almodovar, late President of the Chamber of Procuradores, who had placed himself at the head of the Junta Consultativa of his native province of Valencia, and who afterwards felt himself constrained to accept the Presidency of the Junta de Gobierno, although from the violence of his associates he was compelled almost immediately after to retire for personal protection on board an English vessel in the harbor, has testified his submission to the central government at Madrid, in the most unequivocal terms, by shipping off the rest of the junta to the Spanish penal settlement on the coast of Africa, while he himself at the same time has signified his acceptance of the office of Minister at War. The Junta of Galicia has in like manner sent in the unconditional submission of its members to the Queen's Government, and has at the same time pronounced it sown dissolution. The Junta of Barcelona has also announced its readiness to dissolve itself, as soon as the Queen's government shall have appointed some one, in the absence of the Captain-General, to assume the command of the armed forces of the principality. With regard to the troops under the command of Las Navas, no further apprehension was entertained respecting them. As the whole secret of his strength consisted in the expression, almost unanimous, of public opinion against the administration of Toreno, it was clear that, as the provincial juntas had agreed to support the government of Mendizabal, any attempt on the part of Las Navas to push forward to the capital could only lead to his own destruction. Indeed, the cry had already been raised in Madrid, that he ought to be hanged for not dispersing his troops and laying down his arms on the first intimation of Toreno's downfall. In addition to these interesting facts, it is announced in Mendizabal's despatches, that the Cortes have been convoked for the 16th of November, in the ordinary course, under the provisions of the *Estatuto Real*, thus affording a circumstantial and conclusive contradiction to the sinister rumors so industriously spread by the organs of the French Government, if not by one of the highest of the diplomatic functionaries.

SANTANDER, Sept. 29.—The steamboat not having started as yet for Falmouth, I have an opportunity of communicating to you the news from Madrid, which is highly favorable to the new Ministry. The soldiers who were moving from Andalusia towards Madrid, stopped at Valdepenas on receiving intelligence of the change of Ministers. The nomination of Mina to be Captain General of Catalonia, that of Palafox to be that of Arragon, of Caratala to be that of Valencia, of Rodil to be that of Estremadura, of Quiroga to Grenada, and of Butron to be that of New Castile, has given satisfaction to the popular party. The Queen Regent has also ordered the pay due to her husband's rank to be given during life to the widow of Torrijos, and has paid the first instalment out of her privy purse, until the Cortes shall have sanctioned the pension as a public one.

The new Ministry was not yet fully arranged, nor was it expected to be so until after the arrival in Madrid of General Alava, which may take place towards the close of this week.

Senor Mendizabal, whose activity astonished the people of Madrid, was attacked by a severe cholic one night last week—his illness was magnified, and all the operations in the funds stopped for the day. He is now fully recovered.

The following article is copied from one of the Madrid papers:—"It is stated that one of the chief officers having applied to Senor Mendizabal to know what he ought to do with the garrison of Madrid, in case the troops from Andalusia should approach the capital 'Join together and march to Navarre; I will remain here alone with the Urbanas,' was the reply, coolly given. This answer has given satisfaction to all parties favorable to the cause of the Queen."

Addresses continue to pour in from all quarters to the Queen Regent; and the ferment of the public mind being allayed, nothing remains for the ministry, after its formation, but to call the Cortes together to make good laws, and to establish proper reforms, and to put down the rebels.

One great act of Senor Mendizabal has been to oblige the Gazette, which has long been a nonentity on political subjects, to publish articles of immediate utility in order to illustrate the public mind.

BILBOA, Sept. 25.—The British Auxiliary Legion continues in this city, where the improvement of the soldiers in discipline and in the musket is such as to give satisfaction to their warmest friends; while on the other side the Carlist adherents do not conceal their rage and disappointment on finding this town placed beyond their reach.

Rumors have, during some days, been afloat of some skirmishes between the Carlists and the division of Espelata, which left this town on last Friday; and although the rebels assert that that General was beaten, that he lost three thousand men &c., the best informed state that nothing occurred except some trifling skirmishes. On the other side the Queen's friends speak of intelligence having arrived of a victory gained by General Aldama on the 12th, over the Navarese battalions in the neighborhood of Mendigorria, in which the latter lost in consequence of the repeated charges of the Queen's cavalry 800 killed and 200 wounded. The confirmation as well as the details of this action are much desired.

BAYONNE, Oct. 1.—No authentic intelligence has reached Bayonne from the seat of war in the northern provinces of Spain since the despatches from General De Lacy Evans and Colonel Wylde, on the 22d ult., from Bilboa.

The report of a battle also in the neighborhood of Orosco, on the 20th ultimo, 6 leagues from Bilboa, is not confirmed; indeed it is scarcely possible that any thing of the sort could have taken place, the letters from Bilboa of the 22d ultimo, at so short a distance from the pretended scene of action, having made no mention whatever of it.

THE CONGRESS OF SOVEREIGNS.

TOPLITZ, Sept. 23.—The diplomatic corps has nearly completed its numbers; however the King of Prussia is not expected until the 26th, and the Emperor of Russia about the 29th of this month. The Kings of Bavaria and Wurtemburg, and the Grand Duke of Baden, who were on the list of Royal invitations, have sent apologies. It is also thought that the meeting of the Sovereigns will be of shorter duration than at first anticipated, but it is probable that our monarch will be able to persuade the other Sovereigns to accompany him for a few days to Prague. The crowd of strangers arriving here increases from day to day. The usual ceremony of inscribing their names on the visiter's list, is still adhered to, and even the crowned heads observe this regulation as well as private individuals. The Emperor and Empress of Austria were entered under the numbers 2642 and 2643. Several strangers have been under the necessity of seeking lodgings in the surrounding villages, as all the apartments in the town are as full as they can hold.

LONDON, Oct. 5.—In Paris on Saturday afternoon accounts had been received at Toplitz of a formal proposal having been made by Russia to her Austrian and Prussian allies, the objects of which were to produce a direct intervention in Spanish affairs, for the ostensible purpose of restoring the tranquility of the Peninsula; and secondly for such a definitive adjustment of the Belgian question as would afford some protection to the interests of the King of Holland. It is to the decisive rejection of this double proposal that the extreme firmness of the money market in Paris, during the last week, is ascribed, some of the principal speculators having several days before, been in possession of correct information on the subject. Public confidence had been further confirmed by the proceedings of the councils-general in the French departments, which afford an accurate and satisfactory test of the general prosperity which prevails throughout the country.

GREECE.

A letter from Toulon, of the 26th ult., has the following: "The sloop *Cornelie* has arrived with important despatches from Admiral Massieu de Clerval, touching the present posture of affairs in Greece. At the departure of the *Cornelie*, several engagements had taken place between the insurgents of Romelia and the Bavarian troops sent in pursuit of them. The latter have already experienced several checks. The rallying cry of the insurgents is "The Constitution for ever." A letter from Salamis of the 7th, states, that "the Bavarian troops and National Guards, sent against the Constitutionalists, who have raised the standard of revolt in the western provinces, have been beaten. Intense agitation exists in every quarter, and great irritation prevails against Count d'Armsperg. The people detest the Bavarians, who occupy every place; they ruin the country, and send our money to their native land—hence specie is very scarce.

Another letter from Salamis contains the following:—"Greece is in insurrection. Colette has quitted on board the *Nelsm*. He remained until the latest moment, in expectation of a revolution in Athens and the Pyræus. The government neglects to drain the marshes, and fevers prevail—six thousand persons are sick. The diplomatic body has been outwitted by the Austrian Ambassador, who has concluded a separate treaty with the Greek Government. The three powers, in return for the loan of the 60 millions, desired the establishment of a foreign tribunal for their respective subjects who might commit offences in Greece. A proposal to this effect was rejected, and the Austrian Ambassador, by not seconding the point, has insinuated himself into the good graces of the Greek Government. The annual expenses continue to exceed the revenue by six millions, and nothing is done."

A new and beautiful Steamboat called the Shark, has recently been built in this city for O. Mauran, Esq. She is upwards of 300 tons burthen, 150 feet in length, and finished and furnished in the most splendid style. She has been built under the superintendence of Cornelius Vanderbilt, Esq., and from the trials that have been made, she is believed to be one of the fastest boats ever built. We understand Mr. Mauran sails in her shortly for Havana, where he proposes to establish her as a regular packet between Havana and New Orleans, and if possible form a regular line from Charleston to Havana, which, with the present line to Charleston, would form one regular communication from this port to New Orleans. Such an undertaking deserves patronage, as it would be of great public utility and importance.—[Daily Adv.]

The Charleston Courier of Monday last relates the particulars of the breaking up a den of infamy in that city, kept by a man named June—where unfortunate women were forcibly retained, in order to allure seafaring men and others. These female victims of the most detestable and cold blooded speculation, were mostly brought on from this city—where the wife of the monster *June*, it is understood, now is, in search of a fresh supply.

The wretched women were taken away from the house, and put in charge of the civil magistrate.—Their names are as follow:

Jane Smith, aged 22, of New York; has a mother and sister in Columbia street, who are reputable.

Hannah Baker, aged 23, belongs to Philadelphia.

Henrietta Hutchins, aged 20, of Philadelphia; was once married to a Captain of a vessel.

Eliza Wilson, 17 years old last March, of Newburgh, New York.

Sally Sherwood, aged 26, of New York.

Elizabeth Buckley, of New York.

[For the N. Y. American.]

Stanzas.

Oh! not to me, oh! not to me, that look of cold disdain—
From others I could calmly brook
The careless word—the chilling look—
But, oh! from thee—'tis pain.

The silver chord—the silver chord—when severed may unite
With other ties, but oh! when broke,
The Lute from whence those chords awoke,
It may no more delight.

As to the Sun—the glorious Sun—the bending Persian prays,
So lingers till he views no more
Its light—nor ceases to adore
In gloom, its parted rays.

So in my heart—my faithful heart—the love that budded there
Still clings, as when in youth it clung,
For mem'ry, constant mem'ry, flung
With fond and anxious care.

So many thoughts—so many thoughts—of bliss, o of love, of pain—
When I would drive thee from my mind
Her magic wreaths thine image bind—
The effort is in vain.

Then, not to me, oh! not to me, that look of cold disdain—
From others I could calmly brook
The careless word, the chilling look—
But, oh! from *thee*—'tis pain. ELLA.

A little girl named Elizabeth, daughter of J. R. Winters, 63 South-Fifth street, Philadelphia, fell over the bannisters of the 3d story, and died in a few minutes.

STEAM ENGINE WANTED.

A good, *second* hand, Steam Engine, of 10 or 12 horse power, is wanted for a boat to be used on a Canal. Any gentleman having an engine suitable for that purpose, which he can sell cheap, may address a note to, or call upon, the Editor of this Journal, who is desired to make inquiry, and to communicate the result to the advertiser.

JAMES RIVER AND KANAWHA CANAL, VIRGINIA.

NOTICE TO CONTRACTORS.

THE Board of Directors of the James River and Kanawha Company, having resolved to place under contract seventy-three miles of the line of their improvement, viz: All that part extending from the water works dam at Lynchburg, to the end of section No. 118, in the village of Scottsville, and the thirteen miles between the Seven-Island Falls, and the village of Columbia—

Sealed proposals will be received by the Secretary of the Company, at their office in the city of Richmond, from November 18th, to December 7th, inclusive, for all the excavation, embankment and walling in that distance.

The portion of the line which it is intended to let, comprises many difficult points, and a considerable amount of river walling and blasting

The line will be prepared for examination by the 18th of November; after which date, up to the time of letting, all needful information will be given, and the maps and profiles exhibited to contractors, on application being made to either of the Principal Assistant Engineers, Simon W. Wright, in the village of Cartersville, Daniel Livermore, a Scottsville, and Charles Ellet, jr., in the town of Lynchburg.

It is expected that the proposals of contractors who are not personally known to either of the Assistant Engineers, will be accompanied by proper testimonials of character and experience, from the Engineers of other works on which they have been engaged.

The seals of the proposals will be broken on the 10th of December, and the acceptance of the propositions by the Board, made known as soon after, as will be practicable.

By order of the President and Directors

W. B CHITTENDEN, Secretary.

Note—This advertisement is not intended to embrace the Locks, Dams, Culverts, or any other of the works of art—Prior to the letting of which, as well as of the residue of the excavation and embankment between Scottsville and Maidens' Adventure, due notice will be given. 44—t7D

ENGINEER DEPARTMENT,

BALTIMORE AND SUSQUEHANNAH RAILROAD COMPANY.

October 19, 1835.

To Contractors.—Proposals will be received between the 20th and 25th of November next, for the Graduation and Masonry on 20 miles of this Road.

ISAAC TRIMBLE,
Engineer B. & S. R. R. Co.
WILLIAM GIBBS McNEILL,
Consulting Engineer.

ENGINEER DEPARTMENT,

WRIGHTSVILLE AND YORK RAILROAD COMPANY.

October 19, 1835.

To Contractors.—Proposals will be received in York, Penn., between the 20th and 25th of November next, for the Graduation and Masonry, of the whole line of Road.

ISAAC TRIMBLE,
Engineer W. & Y. R. R. Co.
WILLIAM GIBBS McNEILL,
Consulting Engineer.
Oct. 31,—3t.

TO TUNNEL CONTRACTORS.

Proposals will be received by mail, or otherwise, for excavating a Tunnel on the summit of the Sandy and Beaver Canal. The Tunnel is 900 yards long, the material to be removed is a soft sand-stone rock, the highest part of the ridge through which it passes is about 90 feet above the top of the Tunnel. As the deep cuts at the termination are not excavated, most of the material will have to be removed through shafts. Proposals must be accompanied with good recommendations, as to skill and competency.

E. H. GILL,
Engineer.
New-Lisbon, Ohio, Sept. 17, 1835. 38—6t

TO TUNNEL MINERS, DRILLERS, &c.

Wanted, immediately, 40 Tunnel Miners, (Cornish Miners will be preferred,) 80 Drillers, 50 Laborers, and two experienced Mine Blacksmiths, on the New York and Harlem Railroad, about five miles from the City. Liberal wages will be given, and cash payments made every fortnight. Apply at Mr. FOWLER'S, St. John's Hall, Frankfort street, New-York.

JOHN RUTTER, Contractor.

☞ The Albany Argus, Philadelphia U. S. Gazette and Pennsylvanian, will please copy this, and send their bills to the Railroad Company, 14 Wall street, New-York. 23—tf

NEW-ORLEANS AND NASHVILLE RAILROAD.

NOTICE TO CONTRACTORS.

The New-Orleans and Nashville Railroad Company having decided to place under contract the first fifty miles of the Road, on the 15th day of December next, Proposals will be received at their Office, in the City of New-Orleans, from the 15th of November to the 15th day of December next, for the Graduation and Bridging of the same.

The Superintending Engineer, R. S. Smith, will be upon the ground to give every explanation relative to the manner of making Proposals, and such other information as may be required.

Of persons not personally known to the Engineer, there will be required certificates of character and qualifications.

This part of the road, extending along the shore of Lake Pontchartrain, is perfectly healthy throughout, and being the commencement of the most extensive work in the world, it cannot fail to be of great importance to Contractors to identify themselves with the work at its commencement, as those who are known to the Company as responsible and efficient will certainly be preferred to strangers during the future progress of the road.

The country through which the line passes is generally high pine ridge, and perfectly healthy.

H. J. RANNEY,
Chief Engineer N. O. & N. Railroad.
Engineer Office, N. O. & N. Railroad,
Aug. 25, 1835. 37

RAILROAD IRON WORK,

Of all kinds, made to order by GODWIN, CLARK & CO., Paterson, New-Jersey.

Car Wheels, Boxes, Axles, and Car Springs, made and fitted complete, at short notice, and fair prices.

Orders addressed to them at Paterson, N. J., or 24 Broad street, N. Y., will meet with immediate attention.

Paterson, Aug. 19, 1835. 34—1y

AMES' CELEBRATED SHOVELS, SPADES, &c.

500 dozens	Ames'	back-strap and	plain Shovels,
75	do	do	round-pointed do
150	do	do	cast steel Shovels and Spades,
100	do	do	Socket Shovels and Spades,
150	do	do	steel plated Spades,

Together with Pick Axes, Churn Drills, and Crow Bars, steel pointed, made from Salisbury refined iron. For sale by his Agents,

WITHERELL, AMES & CO.
2 Liberty street, New-York.
BACKUS, AMES & CO.
34—ytf 8 State street, Albany.

RAILROAD IRON.

300 tons of Railroad Iron of the T pattern, just imported and for sale by HOWLAND & ASPINWALL,
s26 10t 55 South street.

RAILWAY IRON.

195 tons of 1	inch by	½ inch,	*Flat Bars* in lengths o	
200 do.	1½ do.	½ do.	14 to 15 feet, counter sunk	
40 do.	1½ do.	⅜ do.	holes, ends cut at an angle	
800 do.	2 do.	½ do.	of 45 degrees, with spli-	
800 do.	2½ do.	½ do.	cing plates and nails to	
soon expected.			suit.	

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2½, 2⅝, 2¾, 3, 3⅛, 3¼, and 3½ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

PARTNER WANTED.

Wanted, a partner in an extensive Printing Establishment. No one need apply who is not a thoroughbred printer, competent to superintend and direct an office in which upwards of 30 persons are employed, and able to furnish $3000 cash capital. The best of references will be given and required. Letters, with *real* name, may be addressed to P. P. P., Post Office, New-York, postage paid, and they will be promptly attended to. May-tf

RAILROAD CASTINGS.

MANY & WARD, Proprietors of the Albany Eagle Air Furnace and Machine Shop, will make to order car wheels, chairs and knees, and every other description of castings required for railroads. R-1y feb14

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad,

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad now in operation. J26 tf

RAILROAD CAR WHEELS AND BOXES AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to.

Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 222 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

1J2sam H. BURDEN.

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscrber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*, among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also a Railroad Goniometer, with two Telescopes—and a Leveling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker,
No. 9 Dock st., Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee the following information. The whole number of Levels now in possession of the department of construction of thy make is seven The whole number of the "Improved Compass" is eight These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Sup't of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. and Germant. and Norrist. Railroad

m1 1y